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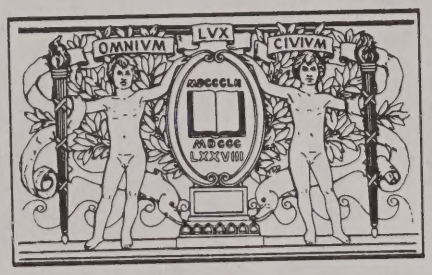

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MEMORANDUM JULY 30, 1975

TO: BOSTON REDEVELOPMENT AUTHORITY

FROM: ROBERT T. KENNEY, DIRECTOR

SUBJECT: SOUTH END PROJECT, MASS. R-56
SITE PREPARATION CONTRACT "M-1"
AUTHORIZATION TO REJECT ALL BIDS AND RE-ADVERTISE

On July 3, 1975, bids were opened on Site Preparation Contract "M-1" in the South End Urban Renewal Project. A copy of the bid tabulation is attached. The Engineers, CE Maguire, Inc., final estimate was $1,416,055.00

The work consists of installing approximately 5,700 linear feet of new water mains and approximately 14,600 linear feet of cleaning and cement lining of existing cast iron water mains; and the replacement of services with provision to supply temporary service during the operations on Wellington Street, Braddock Park and portions of Columbus Avenue, Tremont Street, Massachusetts Avenue and Claremont Street.

The instructions to bidders Paragraph 13.0 "Award of Contracts, Rejection of Bids" contains the following: "Bid shall not contain abnormally high or low prices for any class of work." The Spiniello Construction Company, contained four (4) abnormally low unit prices and six (6) abnormally high unit prices.

The second bidder, M & C Division, Browning-Ferris, Inc., is protesting any proposed award of the Spiniello Construction Company because of the abnormally high and low unit price bids. M & C Division contends, in the attached letter, that based upon his own engineers estimate of the unit quantities required by the plans and specifications, that the Spiniello Construction Company, because of their abnormally high and low bids would result in a final contract cost of approximately $150,000 to $200,000 more to the Authority than the second bidder, M & C Division, final cost using the same unit quantities.

I would also like to call to the Authority attention, that Spiniello Construction Company has been awarded, by competitive bidding, all the Authority contracts in the past for this type of cement lining of water mains. Many of these bids contained abnormally high and low units in contradiction to the terms of the bid specifications. This has resulted, in at least in one instance, because of the unit price quantities actually utilized on the job that the apparent low bidder, cost the Authority significantly more than the second low bidder who would have using the same unit quantities.

It is therefore recommended that the Boston Redevelopment Authority reject all the bids submitted on Site Preparation Contract "M-1" in the South End Urban Renewal Project.

VOTED: That the Boston Redevelopment Authority hereby rejects all the bids submitted on July 3, 1975 concerning Site Preparation Contract "M-1" in the South End Urban Renewal Project and that the Executive Director, on behalf of the Authority, be authorized to immediately readvertised Site Preparation Contract "M-1" with the intent of having the bid opening in time to be considered at the Authority meeting of August 27, 1975.

SOUTH END PROJECT, MASS. R-56
Site Preparation Contract "M-1"
Schedule of Abnormally Low and Abnormally High Prices

In the instructions to Bidders, Paragraph 13.0 "Award of Contracts, Rejection of Bids", the following is contained: "Bids shall not contain abnormally high or abnormally low prices for any class or item of work."

A review of the bidding reveals the following items to be at a variance with the Instructions to Bidders:

Item 6-1 Rock Excavation - 1800 C.Y.

Engineers Estimate	$35.00/C.Y.
Spiniello Construction Company	$ 0.01/C.Y.

Item 7-1 Bank Gravel - 12,000 C.Y.

Engineers Estimate	$ 5.00/C.Y.
Spiniello Construction Company	$ 0.01/C.Y.

Item 9-1 3-inch or 4-inch C.I.P. or D.I.C.L. Water Pipe - 400 L.F.

Engineers Estimate	$18.00/L.F.
Spiniello Construction Company	$40.00/L.F.

Item 9-2 6-inch D.I.C.L. Water Pipe - 400 L.F.

Engineers Estimate	$20.00/L.F.
Spiniello Construction Company	$50.00/L.F.

Item 9-3 8-inch D.I.C.L. Water Pipe - 4,700 L.F.

Engineers Estimate	$30.00/L.F.
Spiniello Construction Company	$70.00/L.F.

Item 9-4 12-inch D.I.C.L. Water Pipe - 1,000 L.F.

Engineers Estimate	$40.00/L.F.
Spiniello Construction Company	$80.00/L.F.

Item 9-6 Additional Fittings - 73,000 Lbs.,

Engineers Estimate	$ 1.00/Lb.
Spiniello Construction Company	$ 0.01/Lb.

Item 9-27 Watertight Plug - 2 each

Engineers Estimate	$250.00/Each
Spiniello Construction Company	$600.00/Each

Item 11-1 3-inch Temporary Bituminous Pavement - 11,000 S.Y.

Engineers Estimate	$ 7.00/S.Y.
Spiniello Construction Company	$ 0.01/S.Y.

Item 12-1 Engineers Field Office - 1 Each

Engineers Estimate	$ 5,000.00/Each
Spiniello Construction Company	$10,000.00/Each

July 3, 1975

BOSTON REDEVELOPMENT AUTHORITY

Tabulation of Bids

SITE PREPARATION CONTRACT "M-1," SOUTH END MASS R-56
(Cleaning and Lining of Sewers)

Opened and read aloud at the Office of the Boston Redevelopment Authority, City Hall, One City Hall Square, Boston, July 3, 1975 at Twelve Noon, EDST.

CONTRACTOR	PROPOSED CONTRACT SUM	BID SECURITY CHECK
Spiniello Construction Co.	$ 1,584,898.00	$ 90,000.00
M & C Division Browning-Ferris Inc.	1,591,145.00	80,000.00
Engineering Estimate	$ 1,416,055.00	

CE Maguire, Inc.
Combustion Engineering, Inc.
60 First Avenue
Waltham, Massachusetts 02154

Tel. 617/890-0100
Telex: 92-3403
Cable: CEMI

M-1
Pre Contr.

TEC
Architects • Engineers • Planners

July 10, 1975
CEM #652.386F

Boston Redevelopment Authority
One City Hall Square
Boston, Massachusetts 02201

Attention: Mr. William Barbato, Project Engineer

Reference: South End Project R-56
Site Preparation Contract "M-1"
Review of Low Bid by Spiniello Construction Co.

Gentlemen:

There are six items with inordinately high unit prices (high by 100% or more over the estimate).

Of these, four are ductile iron pipe items, ranging from 3" to 12" in diameter. The estimated quantities have been verified by a quick re-scaling and are not expected to vary to any significant extent. The most likely pipe item to vary would be Item 9-1, 3-Inch or 4-Inch D.I.C.L. Pipe, since this is primarily service line which experience has found is more subject to variation. However, the length required has been checked against City Water Division plans and any serious variation would result only if these plans were in error because of omissions. Also, this is the least costly pipe and that of least quantity and even a high percentage of variation should not importantly affect overall contract costs. Any increase in the extent of work would require a Change Order which would require Board review.

Another inordinately high unit price ($600 vs. the estimated $250) was bid for Item 9-27, Watertight Plug. The important question here is whether or not the specification is clear in defining this item since plugs are required on all abandoned pipes broken by trenching to prevent entry of ground water (and adjacent gravel) into them which would undermine the roadway. We believe the specifications are clear on this item and submit the enclosed excerpts for your review. Therefore, the only overrun of this item which we can foresee would result from an unknown.

Boston Redevelopment Authority
Attention: Mr. William Barbato, Project Engineer

July 10, 1975
CEM #652.386F

The remaining inordinately high unit price is $10,000 for the engineer's trailer vs. $5,000 estimated, an item which will not be increased.

Although valve bid prices range from 30 to 40 percent higher than the estimate, the quantities have also been rechecked and verification has been made that there is some "cushion" in each quantity. This "cushion" is for possible additional valves which may be required and/or requested by the Water Division because of malfunction of existing valves during required shutoffs.

The unit price for Temporary Fire Hydrants is 40 percent higher than estimated ($350 vs. $250) and the number required is subject to some variation, but the number required would have to change dramatically to seriously affect the total contract cost.

The inordinately low bid unit prices were as follows:

Item		Bid	Estimate	Quantity
6-1	Rock Excavation	$ .01	$35.00	3,800 C.Y.
7-1	Bank Gravel	.01	5.00	12,000 C.Y.
9-6	Fittings	.01	1.00	73,000 Lbs.
11-1	3" Temp.Bit.Pave-ment	.01	7.00	11,000 S.Y.

It is difficult to see how these low unit prices can work to the detriment of the Authority. With the programmed full-time inspection of the project, the use of bank gravel where required can be enforced. Possibly the low prices for Items 6-1, 7-1, and 11-1 reflect an intent to "pull through" services, which operation would be desirable in that it would tend to lessen inconvenience to residents and vehicular traffic.

Very truly yours,

CE MAGUIRE, INC.

Arthur Landers

Arthur Landers, Project Manager
Environmental Engineering Division

AL/cw
Enclosures

4. Frames and/or covers shall be set flush with the street grades and covers shall slope to correspond with street slopes unless the Contractor is otherwise directed.

5. Masonry shall be removed to such depth as directed in the field and new masonry shall be constructed in accord with City of Boston Standards or as directed to conform to the proposed design. After casting has been set to grade on new masonry it must be encased in Class B concrete at least from subgrade to within 2-1/2 inches from top of casting, or for at least to a depth of six inches and for a distance of 18 inches around the outside of casting.

6. Item 9-25 will pertain only to valves and corporation stops not being removed and/or replaced, and will only pertain to work ordered by the Boston Water Division and/or the Engineer, and shall include the removal of dirt and debris from boxes, and shall include necessary excavation and backfill. Bank gravel refill, where required, will be paid under the applicable item of the proposal.

l. Clean Valve or Corporation Stop Box

1. Where required to obtain access to a valve or corporation stop operator, dirt and debris shall be removed from the valve or corporation stop box to the satisfaction of the Engineer.

2. Item 9-26 pertains only to boxes not being removed and/or replaced, and shall not be applicable where frame and cover are being adjusted to grade.

m. Water Tight Plug

Existing water mains, where indicated and elsewhere where required to remain in service and which require plugging shall be plugged with cast iron plugs or caps properly supported with a thrust block or tie rods, as directed by the Engineer, and shall include necessary excavation and backfill. Bank gravel and rock excavation where required, will be paid under the applicable item of the proposal.

9.4 MEASUREMENT AND PAYMENT

a. General

1. Measurement and payment for all items in this section shall be in conformance with measurement and payment for the comparable items in the Standard Specifications of the City of Boston, Public Works Department, Water Division, on file at New City Hall, except as otherwise stated herein.

2. The unit prices stipulated in the Proposal for all items in this section shall include full compensation for furnishing and installing and

9.4 MEASUREMENT AND PAYMENT (Continued)

l. 1. The number of valve or corporation stop boxes cleaned, Item 9-26, shall be the actual number cleaned in accordance with these specifications and as directed.

2. No valve or corporation stop box which has been or is to be removed and/or replaced under this Contract will be included for payment under this item.

m. The number of watertight plugs, Item 9-27, shall be the actual number installed, complete in place, in accordance with these specifications and as directed.

6.1 SCOPE (Continued)

e. If, in the opinion of the Engineer, the material below the normal grade of the trench is unsuitable for foundation, the material shall be removed to the depth and width as directed, and replaced with bank gravel or suitable granular material and/or compacted crushed stone as directed. Such excavation, and also that excavation in trenches which is below seven feet in depth from average ground surface grade where such additional excavation is required to permit installation of mains below utility lines or to meet existing water mains installed deeper than seven feet, shall be paid for as Earth Excavation Below Grade, Item 6-3.

If the bottom of any excavation is taken out beyond the limits shown on the Plans or prescribed or directed by the Engineer, it shall be refilled at the Contractor's expense with material of an approved quality. If through failure or neglect to properly conduct his work so that the surface of the subgrade is not in proper condition when he is ready to lay the pipe or installation, the Contractor shall remove the unsuitable material and replace it with satisfactory material at his own expense so that the condition of the subgrade meets the approval of the Engineer.

f. Remove Existing Water Line Main Valve - 6 Inches or Greater, Item 6-4, or Remove Existing Service Gate or Meter in Street Boxes, Item 6-5.

Where directed by the Engineer, main valves on water lines and service gate valves (3-inch or 4-inch) or meters in street or sidewalk boxes on services to be abandoned shall be removed and salvaged together with boxes, frames and covers, all of which shall be delivered to the Water Division yard at Albany Street unless the Contractor is otherwise directed by the Engineer or the Water Division. Open ends of pipe 2 inches in diameter and larger shall be plugged with concrete having zero slump and the plug shall have a minimum thickness of at least the diameter of the pipe. Thrust blocks or other suitable reaction backing shall be installed where required. Abandonment of services at meter boxes shall be as directed by the Water Division. All holes shall be backfilled and thoroughly compacted in 12-inch minimum lifts and temporary bituminous resurfacing placed. All of the work of removal and salvage of such appurtenances, boxes, frames and covers, all excavation and backfilling, and plugging of pipes shall be included under Item 6-4, Remove Existing Water Line Main Valve 6-Inches or Greater, or Item 6-5, Remove Existing Service Gate or Meter in Street Boxes. Curb Stops on abandoned services need not be removed unless the Contractor is so directed. Corporation stops with street boxes to be abandoned shall not be removed but these shall be closed and the boxes, frames and covers removed and salvaged. Such work required shall be included for payment under Item 6-5.

6.1 SCOPE (Continued)

Separate payment shall be made under Item 7-1 for bank gravel used as refill and, under Item 11-1 for temporary resurfacing. Excavation shall not exceed that required for removal and plugging. Payment limit for resurfacing shall extend to one foot beyond the outer edges of the boxes. Separate payment for thrust blocks where required will be made under Item 10-1. All such work required to replace an existing valve with a new valve as required by the Plans or as directed and all such work on appurtenances and boxes within the trench for new or relay mains or services or within excavations otherwise required by the Contract work will not be paid for separately under Items 6-4 and 6-5.

g. Remove Existing Blow-Off and Plug Tee at Main, Item 6-6.

Where shown on the Plans, and elsewhere as the Engineer or Water Division may direct, blow-offs to the sewers or drains shall be removed from the mains. The blow-off line shall be removed at the tee and the tee plugged with a cast iron cap (or plug if permitted by the Water Division) threaded or lead jointed, or where these are impracticable, the plug may consist of zero slump concrete of approved thickness. In any case, the cap or plug shall not be acceptable unless it is approved by the Water Division.

Appropriate reaction backing shall be installed. The blow-off valve shall be removed and all pipe ends on the abandoned line properly plugged with concrete.

If the total length of blow-off line (from water main to sewer) is ten feet or less, it shall be removed in its entirety from the tee to within approximately two feet from the outside face of sewer or drain structure; the remaining open pipe end at the sewer or drain shall be plugged to the satisfaction of the Engineer.

If the Engineer permits, in writing, the removal of a blow-off, the pipe may be cut and plugged beyond the valve, the valve closed permanently and buried as hereinbefore specified under Items 6-4 and 6-5, and the box removed and salvaged. Appropriate reaction backing shall be installed, and the remaining pipe shall be removed to within two feet of the sewer, and plugged to the satisfaction of the Engineer. If the length of pipe to be removed exceeds 10 feet from the outside face of the valve body, the work of the additional removal required shall be included for payment

6.3 CONSTRUCTION METHODS (Continued)

These steel plates shall be fastened to the existing pavement by means of removable spikes with heads flush with the top of plate, or some other suitable means to prevent movement of the plates due to vibration caused by heavy moving vehicles. The difference in elevation between the top of plate and street surface shall be smoothed over or ramped with bituminous concrete. Cold patch may be used if permitted by the Engineer. Where spikes cannot effectively be used, where traffic is such that in the opinion of the Engineer ramping at the edges of steel plates would be (or has become) ineffectual, and in the winter months, plates shall be recessed so that the top surfaces are flush with adjacent pavement to permit proper snow removal and to ensure against moving of the plates by plows.

o. Curbing shall be supported in place where possible at all excavations. No additional payment will be made for removal and resetting of curbs as required or for the convenience of the Contractor.

p. All pipes to be abandoned at all excavations shall be plugged with zero slump concrete. The plug shall be at least the thickness of the diameter of the pipe except that plugs in pipes 6 inches or larger shall be 12 inches in thickness. The ends of abandoned pipes smaller than 2 inches in diameter shall be closed by capping or crimping to the satisfaction of the Engineer.

6.4 MEASUREMENT AND PAYMENT

a. The quantity of excavation to be paid for under Item 6-1, Rock Excavation, Item 6-2, Test Pits and Miscellaneous Excavation, and Item 6-3 Earth Excavation Below Grade, shall be the number of cubic yards, measured in its original position by the Engineer, within the limits specified herein, as shown on the Plans or as directed by the Engineer.

b. The quantity of Remove Existing Water Line Main Valve 6-Inches or Greater, Item 6-4, Remove Existing Service Gate or Meter in Street Boxes, Item 6-5, and Remove Existing Blow-Off and Plug Tee at Main, Item 6-6, shall be the number of each actually removed as shown on the Drawings or as directed by the Engineer.

c. Failure to allow ample time for the Engineer to make the required measurements will forfeit the Contractor's right-of-claim to any payment other than that allowed by the Engineer.

d. Payment for excavation under Items 6-1, 6-2, and 6-3 will be made at the Contract unit price per cubic yard under the respective item. Such price and payment shall constitute full compensation for all labor, tools, equipment, plant and materials necessary for the removal and satisfactory disposal or stockpiling of the various materials excavated as specified herein

6.4 MEASUREMENT AND PAYMENT (Continued)

and as ordered. All required sheeting, shoring and bracing, and dewatering shall be considered as included for payment in the respective unit prices listed in the Proposal. Payment under Item 6-2 shall include removal of pavements, backfilling, all grading and rolling to prepare subgrade, disposal of excavated material, and all work incidental thereto. Payment for Excavation Below Grade, Item 6-3, shall be full compensation for excavation, disposal of material and all else incidental thereto. Bank Gravel, Crushed Stone, and Rock Excavation and Temporary Paving, within the payment limits, as required and as directed will be paid for as specified elsewhere.

e. Payment for Remove Existing Water Line Main Valve 6-Inches or Greater, Item 6-4, Remove Existing Service Gate or Meter, in Street Boxes, Item 6-5, and Remove Existing Blow-Off and Plug Tee at Main, Item 6-6, will be made at the Contract unit price, each under the respective item. Such price and payment shall constitute full compensation for all labor, tools, equipment, plant and materials necessary for removal of each service gate or blow-off, including excavation and stockpiling of, or satisfactory disposal of excavated material, and all sheeting, shoring, bracing and dewatering. Rock excavation, bank gravel, crushed stone, and temporary paving, within the payment limits as required and as directed will be paid for as specified elsewhere.

No payment shall be made for furnishing and placing sand required to fill the voids left by any removal of sheeting. For all timber used for sheeting, bracing, etc., whether or not left in place during the progress of the work, the Contractor shall receive no payment. It is understood and agreed that his compensation therefor is included under the items of the Proposal.

No separate payment shall be made for excavation of roadway and walkway pavements or for excavation of roadway bases of bituminous, asphalt, unmortared granite block, or macadam. No separate payment shall be made for excavation of roadway bases of either cement concrete or mortared granite block which are not in excess of 8-inches in depth. Where bituminous, asphalt, macadam or unmortared granite block are on cement concrete or mortared granite block roadway base, the depth of the bituminous, asphalt, macadam or unmortared granite block shall not be included in either measurement or payment under Item 6-1, Rock Excavation.

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CE MAGUIRE, INC.
ARCHITECTS · ENGINEERS · PLANNERS

M-1
Pre Contr

INTER-OFFICE MEMORANDUM

From: A. Landers, CE Maguire

To: W. Barbato, B.R.A.

Job No.: 652.386F

Subject: South End Project R-56
Site Preparation Contract "M-1"
Check Quantities Low Bidder's "High" Bid Items

Date: July 10, 1975

A quantity check of the following items was made this date. A more complete check on all "Unbalanced" bid items will follow.

	Item	Quan. as submitted in Proposal	Neat Quantity
9-1	3" or 4" DICL Pipe	400 L.F.	300 L.F.
9-2	6" DICL Pipe	400 L.F.	441 L.F.
9-3	8" DICL Pipe	4,700 L.F.	4,520 L.F.
9-4	12" DICL Pipe	1,000 L.F.	940 L.F.
9-7	3" or 4" Gate	15 Ea.	7 Ea.
9-8	6" Gate	40 Ea.	36 Ea.
9-9	8" Gate	50 Ea.	48 Ea.
9-10	12" Gate	75 Ea.	65 Ea.
8-5	Temporary Hydrant	93 Ea.	91 Ea.

AL/cw

CE Maguire, Inc.
Combustion Engineering, Inc.
60 First Avenue
Waltham, Massachusetts 02154

Tel. 617/890-0100
Telex: 92-3403
Cable: CEMI

TEC
Architects • Engineers • Planners

July 15, 1975
CEM No. 652.386F

Boston Redevelopment Authority
One City Hall
Boston, Massachusetts 02201

Attention: Mr. William Barbato, Project Engineer

Re: South End Project R-56
Site Preparation Contract "M-1"
Neat Quantity Estimate

Gentlemen:

Submitted herewith is a Xerox copy of Site Preparation "M-1" Engineer's Estimate which includes the bid prices. Shown in red in the quantity column is the latest neat quantity estimate.

The original estimated quantities are the result of rounding up to neat quantity estimates. Quantities which may warrant an explanation are:

Item 6-1 (Rock Excavation)	This item is somewhat higher than the neat estimate because an cccurate determination of this item is unfeasible due to varying pavement and base conditions. This item was increased to avoid possible overrun areas of a potentially high priced item.
Item 7-1 (Bank Gravel)	The quantity estimate in the proposal is lower than the neat quantity. The proposal estimate is 80% of the neat quantity because it was felt that this was a more realistic figure than using 100% bank gravel refill.
Item 9-1 (3" or 4" D.I.C.L. pipe)	The high quantity estimate in the proposal compared to the neat estimate is to cover the replacement of unanticipated services in Tremont Street or Columbus Avenue.

July 15, 1975
CEM No. 652.386F

Item 9-7 (3" or 4" Gate)	This item is high also to cover the replacement of unanticipated services.
Item 9-12 (3/4" services)	The neat quantity estimate is somewhat higher than the proposal estimate due to the adding in of services listed by the City of Boston Water Division as "no record". There generally is no service connection at these locations, but they were included in the neat estimate to illustrate the possibility they may be there.
Items 9-14 and 9-15 (1-1/2" and 2" service)	The proposal quantity is somewhat higher than the neat estimate to cover the replacement of unanticipated services. It should be noted that some of the connections in Columbus Avenue and Tremont Street could be as long as 50 feet.

Very truly yours,

CE MAGUIRE, INC.

Arthur Landers

Arthur Landers, Project Manager
Environmental Engineering Division

RG/AL/rk

enclosures

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July 29, 1975

CEM #652.386F

Boston Redevelopment Authority
One City Hall Square
Boston, Massachusetts 02201

Attention: Mr. Wallace B. Orpin, P.E., Director of Engineering

Reference: South End Project R-56
Site Preparation Contract "M-1"
Review of M & C Estimateof Four Quantities

Gentlemen:

We have reviewed the estimates made by M & C Division of Browning-Ferris Industries, Inc. (letter dated July 21, 1975).

There are two primary problems in comparing their estimate of quantities for Items 6-1, 7-1, and 11-1, Rock Excavation, Gravel Borrow, and Temporary Bituminous Paving, respectively, with ours.

First is the problem of preparing an engineering estimate based on absolute minimum quantities to be expected. M & C has used an average trench width of 2.67 feet for all pipe. The Water Division minimum allowable trench for mains (Standard Sheet No. 10) is 2.5 feet. Thus, the "average" M & C trench is only 2 inches greater than absolute minimum. In our estimate, we have assumed a trench width for services of 3 feet, and for mains, a trench which provides for an 18-inch working space on each side of the nominal diameter of the pipe; thus, for 8-inch mains the trench width was estimated at 3.67 feet and for 12-inch mains, at 4 feet. We feel that this permits adequate working space, and, even if a contractor generally excavates a lesser trench, there should be some provision for the need in some areas for additional excavation due to immediately adjacent and crossing utilities which are abundant in the South End streets. As you are well aware,

there have been abundant complaints from contractors regarding establishing too narrow pay limits which, if followed in the field, too severely restrict their methods of operation; it has been claimed that such pay limits are deceptive, that even though these are specified and/or shown by details on the Plans, a contractor should be provided with adequate paid space to perform his operations. Further soils analysis has verified our assumptions with regard to soil quality in the contract areas. Most of the soil is fill material. While there is good gravel in some locations, most of the fill contains considerable silt and cinders, and frequently brickbats and cobbles. Also, in certain locations, the pipe will be close to the level of peat materials and some overexcavation and replacement with gravel will be required. (See attached memorandum.)

A second problem in comparing our estimate of quantities with that of M & C, whether those of Exhibit A or Exhibit B, is that not only do the bid prices of a contractor reflect his methods, but his methods may also reflect his manner of bidding. A contractor who has bid low for gravel refill, rock excavation, and pavement replacement will of course conduct his operations so as to minimize these quantities in some cases even at the expense of convenience; also, a contractor who has a higher bid for these items will not be as careful and these quantities could run higher.

Another aspect of the difficulty in comparing quantities is that, one intent of the contract is to minimize disruptive excavations and speed contract work and consequently minimize community inconvenience. Thus, for example, "pulling through" of services wherever practicable is encouraged by including trench excavation in the cost of service installation. However, an Engineer's quantity estimate cannot be based on this "hoped-for" outcome and the larger estimated quantities for rock excavation, gravel refill, and pavement replacement permit - and even encourage - a lower bid for these items, thus in turn minimizing them. Thus, based on the manner of bidding, it is entirely possible that quantities may run to the minimums suggested by M & C. On the other hand, based on higher bids for the same items, these could run to the levels estimated. In any case, we feel that these estimated quantities of the Proposal are not unreasonably high. Of course unbalanced bidding will accentuate any final cost differences resulting from normal variation in estimated quantities.

The difference in the quantity of fittings, Item 9-6, is primarily in the couplings required to install new valves to existing lead-jointed pipes. This additional weight is approximately

14,000 pounds (two couplings each at twenty-six 8-inch valves, sixty-eight 12-inch valves). When this is added to the 52,410 pounds estimated by M & C the balance of 6,600± pounds represents what we feel is a normal "cushion" against additional work required primarily by profile problems in the relaying of mains; detailed records of the very old existing main installations, requested of the Water Division for review, were incomplete.

In view of the disdain with which quantity overruns are viewed, it is felt that the only item which might be reduced on any readvertising is rock excavation, based upon the present method of operations in Contract "L-1", and also based on the estimated dimensions of the proposed excavations by M & C as the only other bidder on the subject contract. A more detailed analysis of this item - based on a maximum number of actual field measurements - is nearly completed.

Very truly yours,

CE MAGUIRE, INC.

Arthur Landers, Project Manager
Environmental Engineering Division

AL/cw

Enclosure

CE TEC

To: Art Landers

From: Asaf A. Qazilbash

CEM No. 652.651

Re: BRA Contract M-1, Water Supply Lines, Gravel Quantities

July 29, 1975

We have reviewed the problem described in your memo regarding subject project dated July 28, 1975. There are logs of test borings available along the proposed routes of the water line. These borings were taken mostly for other construction over many years in the past. A review of these borings has indicated that almost all of the trenches will be located in the fill material overlying clay deposits. In some areas there are layers of organic silt and peat sandwiched between the fill and the clay deposits.

The fill generally consists of a mixture of sand, silt, gravel, brickbats, cobbles, etc. At some locations there are cinders mixed with this fill, thus rendering it corrosive to the proposed lines.

In some instances the borings indicate the organic deposits to be within a foot of the proposed 6-foot depth of the trench. In these areas it is likely that some organic silt may be encountered at the pipe inverts. If that should happen, it is recommended that at least a 1-foot gravel bedding be provided under the pipe to separate the organic material from the pipes and thus reduce the corrosion hazard.

Fill containing appreciable quantities of cinders are also corrosive and should not be used as backfill around the pipes for the same reason. The presence of boulders and bricks require the removal of these large sized materials from the backfill around the pipe.

As shown on the attached sketch some portions of the trench must be backfilled with selected suitable gravel. All material around the pipe should consist of selected gravel (this comprises about 4 cubic feet of gravel per linear foot). Further, all material under the street pavement up to a depth of 18 inches must consist of suitable gravel to prevent frost heave problems and give the layered pavement adequate strength to bear the traffic loads (this comprises a volume of 4 cubic feet per linear foot of the trench). Thus, it can be seen that the only place where on-site suitable fill may be used comprises a volume of approximately 9 cubic feet (or approximately 50% of the total fill volume).

Based on our experience in the South End area we estimate that only 50% of the

excavated material could be used as backfill in the trench (this could vary between 30% and 70% depending on the actual material encountered in the excavations).

With a minimum trench width of 2'-6" an estimated 11,000 cubic yards of excavation would be required. By providing an allowance for the thickness of sheeting, approximately 12,000 cubic yards would be required. If an open excavation with side slopes of 1 horizontal to 1 vertical were used, 33,000 cubic yards of excavation would be necessary.

~~If 50% of the excavated material could be reused in the sheeted trenches, about~~ 6,000 cubic yards of bank gravel would be required. Presuming that open excavation will not be permitted and only about 30% of the excavated material could be reused, a reasonable figure for the required gravel would be around 8,000 cubic yards. Our specified restrictions for stockpiling excavated materials may require that the contractor haul away all excavated material from the site and then bring back offsite gravel material to refill the trenches. In this case the entire 12,000 cubic yard could consist of gravel refill.

I am also enclosing a memo from Jim Stangenberg to the files dated July 29, 1975.

AAQ:mt

encs.

cc: S. Stevens
J. Stangenberg

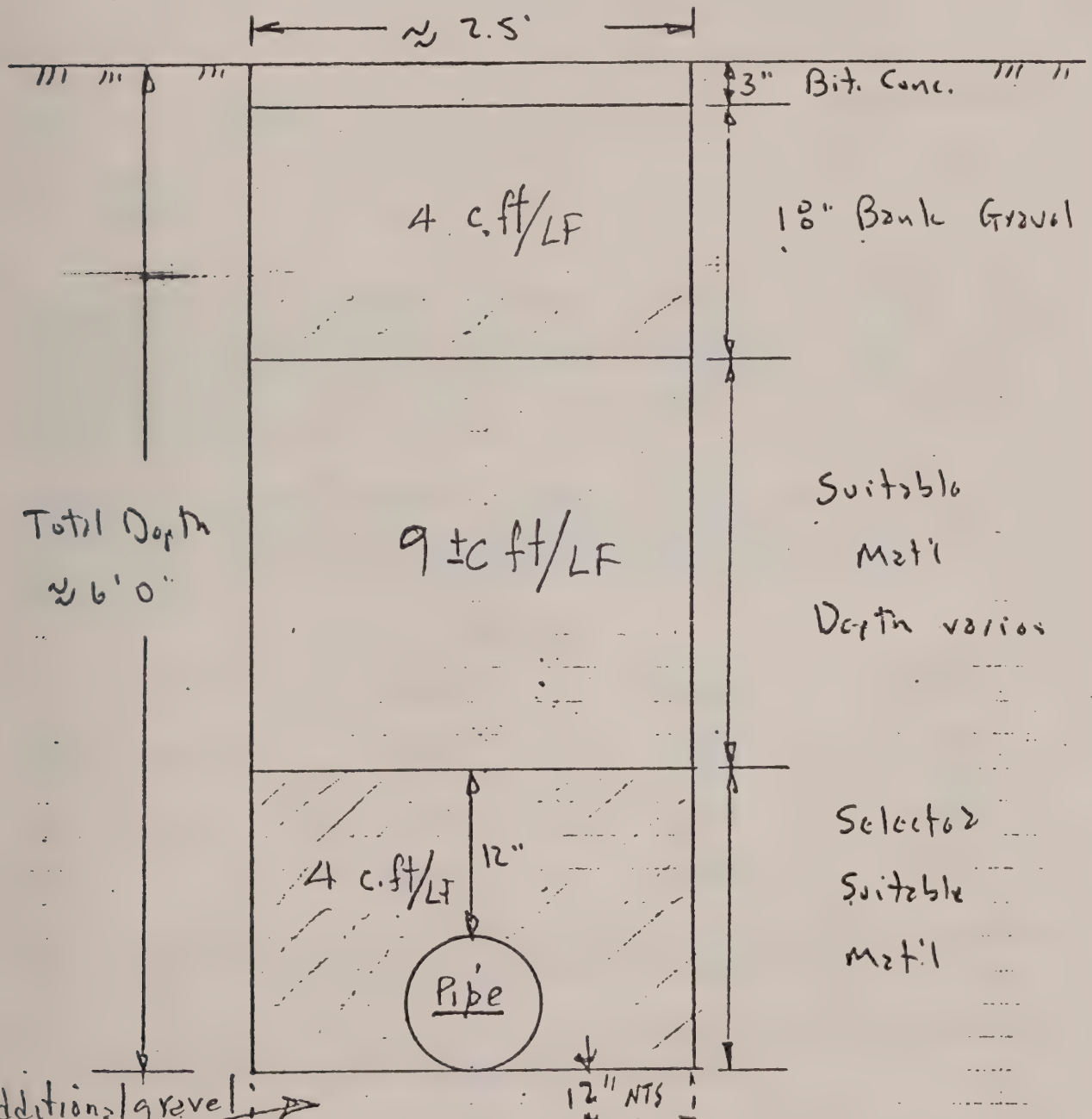
PROJECT BRA Contract III-1 ACC. NO. 652.03

SUBJECT Gravel Refill Quantity Estimate SHEET NO. ___ OF ___

DATE 7.29.1975

COMP. SFS CHECK AAQ CONT. NO. ___

TYPICAL WATER MAIN TRENCH



Additional gravel may be reqd. in areas having cinder fill

Total Vol of Excavation ≈ 18 cf / lin. ft.

Vol of Pipe ≈ 0.4

Req'd Refill ≈ 17.6 cf / lin ft

Bit Conc. ≈ 0.6 cf / lf Selected Suitable ≈ 4 cf/lf

Bank Gravel ≈ 4 cf / lf ∴ Suitable Refill ≈ 17.6 - 8.6 ≈ 9 cf/lf

TEC

To: Files

From: J. K. Stangenberg CEM No. 652.651

Re: Refill July 29, 1975
BRA Contract M-1

With regard to the bank gravel item for the above contract, the 12,000 cubic yards of gravel borrow would appear high for the job. Using a minimum trench width of 2'-6" would give 11,000 cubic yards excavation without allowance for sheeting. With allowance for sheeting, about 12,000 c.y. would be required. No sheeting or open excavation would require say 1:1 side slopes and 33,500 c.y. excavation.

The amount of Bank Gravel required is a judgment factor, approximately 50% may be estimated which would yield either 5,500, 6,000 or 16,750 c.y. of bank gravel required. Bank gravel may run as high as 2/3 or as low as 1/3 on the whole job. See tabulation below.

Bank Gravel

	Minimum	Maximum	Average
Without Sheeting	3,800	7,800	5,500
With Sheeting	4,000	8,000	6,000
Open	11,000	22,000	16,750

Presuming the Contract would not be allowed the option of open excavation and presuming maximum bank gravel is required 8,000 c.y. would be a reasonable figure.

However, this contract is unit price and the client may wish to protect himself against overrun and may rather go the full amount for replacement.

JKS:mt

cc: S. Stevens
A. Qazilbash

July 23, 1975

M E M O R A N D U M

TO: BOSTON REDEVELOPMENT AUTHORITY

FROM: ROBERT T. KENNEY, DIRECTOR

SUBJECT: SOUTH END PROJECT, MASS. R-56
Site Preparation Contract "M-1"
Permission to award a contract to
Spiniello Construction Co., Inc.

On July 3, 1975 bids were opened on Site Preparation Contract "M-1" in the South End Urban Renewal Project. A copy of the bid tabulation is attached. The Engineers, CE Maguire, Inc., final estimate was $1,416,055.00.

The lowest responsible bidder was Spiniello Construction Company with a bid in the amount of $1,584,898.00.

The work consists of installing approximately 5,700 linear feet of new water mains and approximately 14,600 linear feet of cleaning and cement lining of existing cast iron water mains; and the replacement of services with provision to supply temporary service during the operations on Wellington Street, Braddock Park and portions of Columbus Avenue, Tremont Street, Massachusetts Avenue and Claremont Street.

The Instructions to bidders Paragraph 13.0 "Award of Contracts, Rejection of Bids" contains the following: "Bid shall not contain abnormally high or low prices for any class of work." The Spiniello Construction Company, contained four (4) abnormally low unit prices and six (6) abnormally high unit prices. A review of the contract has determined that these items will not adversely affect or work to the serious detriment of the Authority. The six (6) abnormally high unit prices are measurable items and should not exceed the estimated quantity.

In awarding the contract to Spiniello Construction Company the Authority must waive the abnormally low and abnormally high unit prices that were bid.

It is, therefore, recommended that Site Preparation Contract "M-1" be awarded to Spiniello Construction Company, based upon the unit prices bid and the estimated quantities in the amount of $1,584,898.00.

VOTED: That Site Preparation Contract "M-1" in the South End Project, Mass. R-56 be awarded to the lowest responsible bidder, Spiniello Construction Company, based upon the unit prices bid and the estimated quantities, in the amount of $1,584,898.00 and the Executive Director is authorized to execute said Contract in behalf of the Authority.

SOUTH END PROJECT, MASS. R-56
Site Preparation Contract "M-1"
Schedule of Abnormally Low and Abnormally High Prices

In the instructions to Bidders, Paragraph 13.0 "Award of Contracts, Rejection of Bids", the following is contained: "Bids shall not contain abnormally high or abnormally low prices for any class or item of work."

A review of the bidding reveals the following items to be at a variance with the Instructions to Bidders:

Item 6-1 Rock Excavation - 1800 C.Y.

Engineers Estimate	$35.00/C.Y.
Spiniello Construction Company	$ 0.01/C.Y.

Item 7-1 Bank Gravel - 12,000 C.Y.

Engineers Estimate	$ 5.00/C.Y.
Spiniello Construction Company	$ 0.01/C.Y.

Item 9-1 3-inch or 4-inch C.I.P. or D.I.C.L. Water Pipe - 400 L.F.

Engineers Estimate	$18.00/L.F.
Spiniello Construction Company	$40.00/L.F.

Item 9-2 6-inch D.I.C.L. Water Pipe - 400 L.F.

Engineers Estimate	$20.00/L.F.
Spiniello Construction Company	$50.00/L.F.

Item 9-3 8-inch D.I.C.L. Water Pipe - 4,700 L.F.

Engineers Estimate	$30.00/L.F.
Spiniello Construction Company	$70.00/L.F.

Item 9-4 12-inch D.I.C.L. Water Pipe - 1,000 L.F.

Engineers Estimate	$40.00/L.F.
Spiniello Construction Company	$80.00/L.F.

Item 9-6 Additional Fittings - 73,000 Lbs.,

Engineers Estimate	$ 1.00/Lb.
Spiniello Construction Company	$ 0.01/Lb.

Item 9-27 Watertight Plug - 2 each

Engineers Estimate	$250.00/Each
Spiniello Construction Company	$600.00/Each

Item 11-1 3-inch Temporary Bituminous Pavement - 11,000 S.Y.

Engineers Estimate	$ 7.00/S.Y.
Spiniello Construction Company	$ 0.01/S.Y.

Item 12-1 Engineers Field Office - 1 Each

Engineers Estimate	$ 5,000.00/Each
Spiniello Construction Company	$10,000.00/Each

July 3, 1975

BOSTON REDEVELOPMENT AUTHORITY

Tabulation of Bids

SITE PREPARATION CONTRACT "M-1," SOUTH END MASS R-56
(Cleaning and Lining of Sewers)

Opened and read aloud at the Office of the Boston Redevelopment Authority, City Hall, One City Hall Square, Boston, July 3, 1975 at Twelve Noon, EDST.

CONTRACTOR	PROPOSED CONTRACT SUM	BID SECURITY CHECK
Spiniello Construction Co.	$ 1,584,898.00	$ 90,000.00
M & C Division Browning-Ferris Inc.	1,591,145.00	80,000.00
Engineering Estimate	$ 1,416,055.00	

INTER-OFFICE COMMUNICATION

TO Robert T. Kenney, Director

FROM Wallace B. Orpin, Director of Engineering

DATE July 9, 1975

SUBJECT SOUTH END PROJECT, MASS. R-56
Site Preparation Contract "M-1"

The following is a result of a review of the second bidders submission for the subject contract, which are at a variance with the Instructions to Bidders.

Item 8-5 Temporary Fire Hydrants - 93 Each

Engineers Estimate	$250.00/Each
M & C Division of Browning-Ferris, Inc.	$125.00/Each

Item 9-7 3-inch or 4-inch Gate - 15 Each

Engineers Estimate	$600.00/Each
M & C Division of Browning-Ferris, Inc.	$300.00/Each

Item 12-1 Engineers Field Office - 1 Each

Engineers Estimate	$5,000.00/Each
M & C Division of Browning-Ferris, Inc.	$15,000.00/Each

The 2nd Bidder M & C Division of Browning-Ferris, Inc. had an error in their submission which changes their final total bid to $1,592,495.00 or $7,597.00 higher than the low bidder.

Based upon the above review of two (2) abnormally low and one (1) abnormally high bid, these items would not adversely affect or work to the serious detriment of the Authority.

However, a further review of a comparison of the prices of the abnormal bid items of the low bidder to the prices of the 2nd Bidder reveals the following:

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT PRICE LOW BIDDER	TOTAL LOW'S AMOUNT	UNIT PRICE 2ND BIDDER	TOTAL 2ND'S AMOUNT
6-1	Rock Excavation	3,800./C.Y.	$ 0.01/C.Y.	$ 38.00	$ 35./C.Y.	$133,000.
7-1	Bank Gravel	12,000./C.Y.	0.01/C.Y.	120.00	4.25/C.Y.	51,000.
9-1	3"/4" C.I. Pipe	400/L.F.	40.00/L.F.	16,000.00	27.50/L.F.	11,000.
9-2	6" C.I. Pipe	400/L.F.	50.00/L.F.	20,000.00	30./L.F.	12,000.
9-3	8" C.I. Pipe	4,700/L.F.	70.00/L.F.	329,000.00	42.50/L.F.	199,750.
9-	12" C.I. Pipe	1,000/L.F.	80.00/L.F.	80,000.00	50./L.F.	50,000.
9-	Additional Fittings	73,000/Lbs.	0.01/Lb.	730.00	1.20/Lb.	87,600.

Robert T. Kenney

SOUTH END PROJECT, MASS. R-56
Site Preparation Contract "M-1"
P[redacted] 2

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT PRICE LOW BIDDER	TOTAL LOW'S AMOUNT	UNIT PRICE 2ND BIDDER	TOTAL 2ND'S AMOUNT
9-27	Watertight Plug	2 Each	$600.00/Ea.	$ 1,200.00	$ 160./Ea.	$ 320.
11-1	3" Temp. Paving	11,000 S.Y.	0.01/S.Y.	110.00	8.50/S.Y.	93,500.
12-1	Engrs. Field Office	1 Each	5,000.00/Ea.	5,000.00	15,000./Ea.	15,000.

Low Bidders Estimated Cost of
Unbalanced Items $452,198.00

2nd Bidders Cost of Low Bidders
Unbalanced Items ..... $653,170.

The above shows that the 2nd bidder's cost for the abnormally low and high prices of the low bidder would cost us nearly $200,000. additional. Also, the items more likely to overrun are the one penny items of the low bidder and should these items overrun the Authority would be paying a substantially higher price than the one penny as indicated in the aforementioned tabulation, if the 2nd bidder were doing the job.

The following is a comparison of the prices of the abnormal bid items of the 2nd bidder to t[redacted] prices of the low bidder:

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT PRICE LOW BIDDER	TOTAL LOW'S AMOUNT	UNIT PRICE 2ND BIDDER	TOTAL 2ND'S AMOUNT
8-5	Temporary Fire Hyd.	93/Ea.	$350.00/Ea.	$32,550.00	$ 125./Ea.	$11,625.00
9-7	3"/4" Gates	15/Ea.	500.00/Ea.	7,500.00	300./Ea.	4,500.00
12-1	Engrs. Field Office	1/Ea.	5,000.00/Ea.	5,000.00	15,000./Ea.	15,000.00

Low Bid Estimated Cost of
2nd's unbalanced items..... $45,050.00

2nd Bidders cost of his own
unbalanced items $31,125.00

The above shows that the low bidders cost for the abnormally low and high prices of the 2nd bidder would cost us approximately $14,000.00 additional. The possibility of these items overrunning the estimate is not too likely especially since they are measureable items.

INTER-OFFICE COMMUNICATION

JUL 22 1975
BOSTON REDEVELOPMENT AUTHORITY
OFFICE OF THE DIRECTOR

TO ROBERT T. KENNEY, DIRECTOR

FROM WALLACE B. ORPIN, DIRECTOR OF ENGINEERING

DATE JULY 22, 1975

SUBJECT SOUTH END PROJECT MASS R-56

Contract "N" - contract dated January, 1973

2nd bidder Raymond International.
Based upon quantities used and Raymond's unit prices the cost would have been $684,821.99 or $56,560.08 more.

Contract "V" - contract dated November 1971

2nd bidder Raymond International
Based upon quantities used and Raymond's unit prices the cost would have been $847,007.71 or $92,286.13 less.

Memo of July 18 - on page 2 at top, the final cost of Contract "V" was $939,293.84 (not $845,364.46).

cc: Kane Simonian

July 18, 1975

TO: ROBERT T. KENNEY, DIRECTOR

FROM: WALLACE B. ORPIN, DIRECTOR OF ENGINEERING

SUBJECT: SITE PREPARATION CONTRACT M-1
SOUTH END PROJECT
RE: YOUR MEMO OF JULY 16, 1975

The following is the information requested by your memo.

South End - Contract "N" Bid Tab

Engineer's Estimate	$597,270
Spiniello	$593,695
Raymond	$675,300
Pipe Linings	$728,625

The Spiniello contract had a change order for $19,250.00 making the base contract $614,945. The final contract amount was $628,261.91.

High Units	Price	Estimate	Actual Quantity
8" Gate	1,500/ea.	5	12
Clean & Line 30" Water Pipe	20/L.F.	2900 L.F.	3280
Low Units			
Rock Excavation	1.00/cy	120 cy	52.99
Below Grade Excavation	1.00/cy	50 cy	0
Bank Gravel	1.00/ton	4200 cy	3296.72
Crushed Stone	1.00/ton	150 T	4.01
3/4" Copper Pipe	3.00/F	1200 L.F.	577.9
1" Copper Pipe	4.00/F	80 L.F.	13.0
1½" Copper Pipe	5.00/F	60 L.F.	27.0
2" Copper Pipe	6.00/F	40 L.F.	1.0
3/4" Corp. Stop	30.00/ea.	60	59.0
1" Corp. Stop	40.00/ea.	3	1
1½" Corp. Stop	40.00/ea.	3	1
1½" Corp. Stop with adapter	50.00/ea.	2	3
3/4" Curb Stop	30.00/ea.	60	28
1" Curb Stop	40.00/ea.	3	1

South End Site Prep. Contract "V" Bid Tab

Estimate	$659,815.00
Spiniello	$678,200.00
Raymond	$698,900.00

#939293.7

Spiniello contract had two change orders for $17,240.70 and $64,958.90 making the base contract $760,399.60. Final contract amount was $845,364.46.

High Units	Price	Estimate	Actual Quantity
Rock Excavation	50/cy	30 cy	133.94
Excav. Outside Trench	50/cy	50 cy	28.51
Additional Fittings	4.65/lb.	3000 lb.	22287.25
3" or 4" Gate Valve	500/ea.	4	3
6" Gate Valve	1500/ea.	13	19
8" Gate Valve	1700/ea.	2	4
12" Gate Valve	1900/ea.	24	35
1½" Corp. Stop	500/ea.	3	1
1½" Corp. Stop and 1½"x2" Adaptor	800/ea.	2	5
3/4" Curb Stop	150/ea.	20	6
1" Curb Stop	160/ea.	3	0
R & R Existing Meter	285/ea.	10	0
Hydrant Removed	800/ea.	1	0
Brick Sidewalk and Gutter R & R	100/sy	20	0
Low Units			
Test Pits	1.00/cy	100 cy	107.89
Bank Gravel	1.00/Ton	5300 Tons	2929.74
3" Temp. Pavement	2.00/sy	1900 sy	848.18

South End Contract "P" Bid Tab

Engineer's Estimate	$789.985.00
Spiniello	$669,545.00
Ameron, Inc.	$696,566.00
Raymond	$788,475.00

The Spiniello contract had two change orders amounting to $184,116.10 making the base contract $853,661.00. The contract is not complete and is about 95% done; payments to date do not indicate any overrun.

South End Contract "L1" Bid Tab

Engineer's Estimate	$1,063,685.00
Spiniello	$1,098,749.00
M & C Browning-Ferris	$1,434,675.00

The contract is about 30% complete.

South End Contract "M-1" has the following streets.

Tremont and Columbus	90%
Massachusetts Ave. (part), Braddock Park, Claremont St., and Wellington Street	10%

Charlestown Contract "I" Bid Tab

Engineer's Estimate	$539,855.00
Spiniello	$446,170.00

The Spiniello contract has three change orders making the base price of the contract $562,711.83. The final contract cost was $664,659.21.

High Units	Unit Price	Estimated	Actual Quantity
Fire Hydrant	1600/ea.	10	23
Obstructions	500/ea.	20	20
Asphalt Patch	30/sy	700 sy	1163.9
Low Units			
24" Water Pipe	1.00/f.	20 L.F.	0
16" Water Pipe	1.00/f.	100 L.F.	90
12" Water Pipe	1.00/f	100 L.F.	56
10" Water Pipe	1.00/f	30 L.F.	28
8" Water Pipe	1.00/f	80 L.F.	116
6" Water Pipe	1.00/f	200 L.F.	138
4" Water Pipe	1.00/f	20 L.F.	20
Castings	.01/lb.	5000 lb.	2000
12" Valves	200/ea.	21	14
10" Valves	150/ea.	15	7
8" Valve	100/ea.	32	25
6" Valve	80/ea.	20	19
4" Valve	50/ea.	3	3
2" Temp. Bypass	1.50/f.	6000 L.F.	6222

C.E.Maguire, Inc. has rechecked the contract documents and in particular the estimated quantities. They have found no reason to doubt or change their original contract estimates and feel that any variance could be only minor up or down.

INTER-OFFICE COMMUNICATION

TO Wallace B. Orpin

FROM Robert T. Kenney, Director

DATE July 16, 1975

SUBJECT Site Preparation Contract "M-1"
South End Project

For my information, assemble all the bid tabs for the past 5-6 years concerning any contract for cleaning and lining of water mains in the various project areas.

Also, in regards to any contract with Spiniello Construction Company, provide a tabulation of Spiniello's 4-5 most recently completed contracts with the Authority, including an itemized list of:

- what where the abnormally high and low bid items?
- what were the original estimated unit quantities in each of these high and low items?
- what was the unit prices for each such item?
- for each of these completed contracts what were the actual quantities utilized in the contract?

What other contracts does Spiniello Construction Company presently have under way with the Authority and what is the percentage completed?

What actual streets are involved in Site Preparation Contract "M-1" and what percentage of the work involves Tremont and Columbus?

RTK

RECEIVED
JUL 16 1975
BOSTON REDEVELOPMENT AUTHORITY
OFFICE OF THE DIRECTOR

RECEIVED
ENGINEERING
BOSTON REDEVELOPMENT AUTH
JUL 17 1975

BOSTON REDEVELOPMENT AUTHORITY - MONTHLY QUANTITY ESTIMATE

SITE PREPARATION CONTRACT "N"

Cleaning and Cement Lining of Existing Water Mains

PROJECT: South End Mass. R-56

CONTRACTOR: Spiniello Construction Co.

DATE: May 8, 1974

PAY ESTIMATE NO.: 10 AND FINAL ESTIMATE

ITEM NO.	ESTIMATED QUANTITY	UNIT PRICE	IDENTIFICATION	PREV. TOTAL	MONTHLY TOTAL	TOTAL TO DATE	AMOUNT DUE	TOTAL AMOUNT TO DATE
-1	120 CY	1.00	Rock Excavation	51.14	1.85	52.99	1.85	52.99
-2	200 CY	10.00	Test Pits and Miscellaneous Excavation	60.01	-0-	60.01	-0-	600.10
-3	50 CY	1.00	Earth Excavation Below Grade			-0-		
-4	100 CY	10.00	Excavation in Outside Trench			-0-		
-1	4,200 Tons	1.00	Bank Gravel	2,063.21	1,233.51	3,296.72	1,233.51	3,296.72
-	150 Tons	1.00	Crushed Stone	4.01	-0-	4.01	-0-	4.01
8-1	3,000 LF	2.00	2-Inch Temporary Bypass Pipe for Domestic Purposes	1,922.0	-0-	1,922.0	-0-	3,844.00
8-2	26,000 LF	2.50	4-Inch Temporary Bypass Pipe for Domestic Purposes	23,547.0	1,836.0	25,383.0	4,590.00	63,457.50
8-3	20,000 LF	2.00	4-Inch Temporary Bypass Pipe for Fire Protection	21,126.0	1,531.0	22,657.00	3,062.00	45,314.00
8-4	2,000 LF	4.00	6-Inch Temporary Bypass Pipe for Fire or Domestic Service	885.0	-0-	885.0	-0-	3,540.00
8-5	102 EA	300.00	Temporary Fire Hydrant	106.0	7.0	113.0	2,100.00	33,900.00

MONTHLY QUANT[illegible] ESTIMATE

SITE PREPARATION CONTRACT "N"

DATE May 7, 1974

EM O.	ESTIMATED QUANTITY	UNIT PRICE	IDENTIFICATION	PREVIOUS TOTAL	MONTHLY TOTAL	TOTAL TO DATE	AMOUNT DUE	TOTAL AMOUNT TO DATE
-6	1 EA	900.00	12-Inch x 4-Inch Tapping Sleeve and Valve			-0-		
	1 EA	1,000.00	12-Inch x 6-Inch Tapping Sleeve and Valve			-0-		
-8	13,600 LF	12.50	Cleaning and Cement Lining 12-Inch Cast Iron Water Pipe	14,056.0	-0-	14,056.0	-0-	175,700.00
-9	10 EA	800.00	Obstruction in Pipes to be Cleaned and Cement Lined	19.0	2.0	21.0	1,600.00 ✓	16,800.00
-10	10 EA	180.00	Plugged Service	30.0	1.0	31.0	180.00 ✓	5,580.00
-11	5 EA	200.00	Tap Hole in Existing Service	7.0	2.0	9.0	400.00 ✓	1,800.00
-12	1 EA	1,000.00	Unscheduled Remobilization and Demobilization			-0-		
9-1	60 LF	15.00	3-Inch or 4-Inch C.I.C.L. Water Pipe			-0-		
9-2	250 LF	20.00	6-Inch C.I.C.L. Water Pipe	268.60	14.6	283.20	292.00 ✓	5,664.00
9-3	1,400 LF	30.00	8-Inch C.I.C.L. Water Pipe	587.33	809.00	1,396.33	24,270.00 ✓	41,889.90
9-4	300 LF	20.00	12-Inch C.I.C.L. Water Pipe	498.52	-0-	498.52	-0-	9,970.40
9-5	50 LF	45.00	16-Inch C.L. Ductile Iron Water Pipe	5.0	-0-	5.0	-0-	225.00

MONTHLY QUANTITY ESTIMATE

SITE PREPARATION CONTRACT "N"

DATE May 8, 1974

ITEM NO.	ESTIMATED QUANTITY	UNIT PRICE	IDENTIFICATION	PREVIOUS TOTAL	MONTHLY TOTAL	TOTAL TO DATE	AMOUNT DUE	TOTAL AMOUNT TO DATE
9-6	16,000 LB	1.00	Additional Fittings	19,671.81	1,366.75	21,038.56	1,366.75	21,038.56
	2 EA	500.00	3-Inch or 4-Inch Gate			-0-		
9-8	24 EA	1,000.00	6-Inch Gate	29.0	2.0	31.0	2,000.00	31,000.00
9-9	5 EA	1,500.00	8-Inch Gate	9.0	3.0	12.0	4,500.00	18,000.00
9-10	55 EA	500.00	12-Inch Gate	60.0	-0-	60.0	-0-	30,000.00
9-11	1,200 LF	3.00	3/4-Inch Copper Service Pipe	123.4	454.5	577.9	1,363.50	1,733.70
12	80 LF	4.00	1-Inch Copper Service Pipe	-0-	13.0	13.0	52.00	52.00
9-13	60 LF	5.00	1-1/2-Inch Copper Service Pipe	-0-	27.0	27.0	135.00	135.00
9-14	40 LF	6.00	2-Inch Copper Service Pipe	1.0	-0-	1.0	-0-	6.00
9-15	60 EA	30.00	3/4-Inch Corporation Stop	30.0	29.0	59.0	870.00	1,770.00
9-16	3 EA	40.00	1-Inch Corporation Stop	-0-	1.0	1.0	40.00	40.00
9-17	3 EA	40.00	1-1/2-Inch Corporation Stop	-0-	1.0	1.0	40.00	40.00

MONTHLY QUANTITY ESTIMATE

SITE PREPARATION CONTRACT "N"

DATE May 8, 1974

ITEM NO.	ESTIMATED QUANTITY	UNIT PRICE	IDENTIFICATION	PREVIOUS TOTAL	MONTHLY TOTAL	TOTAL TO DATE	AMOUNT DUE	TOTAL AMOUNT TO DATE
9-18	2 EA	50.00	1-1/2 - Inch Corporation Stop with 1-1/2" x 2" Adapter L	1.0	2.0	3.0	100.00 ✓	150.00
9-19	60 EA	30.00	3/4-Inch Curb Stop L	12.0	16.0	28.0	480.00 ✓	840.00
9-20	3 EA	40.00	1-Inch Curb Stop L	-0-	1.0	1.0	40.00 ✓	40.00
9-21	5 EA	50.00	Install New Water Meter			-0-		
9-22	24 EA	400.00	Hydrant	26.0	2.0	28.0	800.00 ✓	11,200.00
9-23	5 EA	300.00	Hydrant Removed	4.0	-0-	4.0	-0-	1,200.00
10-1	100 CY	20.00	Cement Concrete Masonry	26.76	1.56	28.32	31.20 ✓	566.40
11-1	1,600 SY	3.00	3-Inch Temporary Bituminous Pavement	717.95	788.71	1,506.66	2,366.13 ✓	4,519.98
11-2	600 SY	5.00	3-Inch Cold Patch Paving	427.25	1.33	428.58	6.65 ✓	2,142.90
11-3	50 SY	40.00	Brick Sidewalks and Gutters Removed and Reset			-0-		
12-1	Lump 1 Sum	3,000.00	Engineer's Field Office	-0-	1.0	1.0	3,000.00 ✓	3,000.00
13-1	2,500 HR	6.75	Special Duty Police	2,085.0	200.0	2,285.0	1,350.00 ✓	15,423.75

MONTHLY QUANTITY ESTIMATE

SITE PREPARATION CONTRACT "N"

DATE May 8, 1974

13-2	140 HR	8.25	Special Duty Police Sergeant			-0-		
8-8A	2,900 LF	20.00	Cleaning and Cement Lining 30-Inch Cast Iron Water Pipe	3,280.0	-0-	3,280.0	-0-	65,600.00
9A	1 EA	1,500.00	Obstruction in 30-Inch Pipes to be Cleaned and Cement Lined			-0-		
9-5A	20 LF	100.00	30-Inch C.L. Ductile Iron Water Pipe	9.25	-0-	9.25	-0-	925.00
9-10A	1 EA	2,200.00	16-Inch Gate	1.0	-0-	1.0	-0-	2,200.00
9-10B	1 Token	5,000.00	30-Inch Butterfly Valve	1.0	-0-	1.0	-0-	5,000.00

Total Amount Due to Date	$ 628,261.91
Total Billed Under Previous Invoices	628,261.91
Amount Billed Under this Invoice	62,826.19
PAYMENT DUE (Retainage)	62,826.19

CE MAGUIRE, INC.

Signed: Arthur Lander

SITE PREPARATION CONTRACT "V"

OJECT: South End Mass. R-56

ATE: April 24, 1973

CONTRACTOR: Spiniello Construction Co.

PAY ESTIMATE NO.: 12

EM O.	ESTIMATED QUANTITY	UNIT PRICE	IDENTIFICATION	PREV. TOTAL	MONTHLY TOTAL	TOTAL TO DATE	AMOUNT DUE	TOTAL AMOUNT TO DATE
-1	30 CY	50.00	Rock Excavation H	122.96	10.98	133.94	549.00	6,697.00
-2	100 CY	1.00	Test Pits for Exploratory Excavation L	89.89	18.00	107.89	18.00	107.89
-3	100 CY	1.00	Earth Excavation Below Grade L			-0-		
-4	50 CY	50.00	Excavation in Outside Trench & Refilling H	28.51	-0-	28.51	-0-	1,425.50
-1	5,300 Tons	1.00	Bank Gravel Refill L	2,592.34	337.40	2,929.74	337.40	2,929.74
-2	150 Tons	10.00	Crushed Stone			-0-		
-1	8,000 LF	3.00	2-Inch Temp. By-pass Domestic Pipe Including Services	3,492.00	-0-	3,492	-0-	10,476.00
-2	12,700 LF	4.00	4-Inch Temp. By-pass Domestic Pipe Including Services	18,736.00	-0-	18,736	-0-	74,944.00
-3	15,600 LF	3.60	4-Inch Temp. By-pass Fire Protection Pipe Including Services	25,813.00	163.00	25,976	586.80	93,513.60
-4	1,900 LF	8.00	6-Inch Temp. By-pass High Service Pipe Including Services	3,634	-0-	3,634	-0-	29,072.00
-5	54	330.00	Temporary Fire Hydrants	105	1	106	330.00	34,980.00

ITEM NO.	ESTIMATED QUANTITY	UNIT PRICE	IDENTIFICATION	PREV. TOTAL	MONTHLY TOTAL	TOTAL TO DATE	AMOUNT DUE	TOTAL AMOUNT TO DATE
8-6	1 EA	600.00	12-Inch x 4-Inch Tapping Sleeve & Valve	2	-0-	0 2	-0-	1,200.00
8-7	2 EA	700.00	12-Inch x 6-Inch Tapping Sleeve & Valve	4	-0-	0 4	-0-	2,800.00
8-8	2 EA	1,000.00	16-Inch x 6-Inch Tapping Sleeve & Valve	3	-0-	0 3	-0-	3,000.00
8-9	9,300 LF	6.50	Clean & Cement Line 12-Inch C.I. Water Pipe	8,796	-0-	8,796	-0-	57,174.00
8-10	8,400 LF	6.50 15.00	Clean & Cement Line 16-Inch C.I. Water Pipe Change Order No. 2	6,956	Change Order #2 1,836	0 8,792	27,540.00	72,754.00
8-11	6,800 LF	6.50	Clean & Cement Line 20-Inch C.I. Water Pipe	6,683	27	6,710	175.50	43,615.00
8-12	1,550 LF	11.50	Clean & Cement Line 24-Inch C.I. Water Pipe	1,452	-0-	1,452	-0-	16,698.00
8-13	8,150 LF	20.00 6.50	Change Order No. 2 Clean & Cement Line 30-Inch C.I. Water Line	5,875	2,097 Change Order #2	7,972	41,940.00	80,127.50
8-14	10 EA	1,000.00	Obstruction in pipes, 20-Inch diameter or smaller	19	-0-	0 19	-0-	19,000.00
8-15	3 EA	1,500.00	Obstruction in pipes, 24-Inch or larger	1	-0-	1	-0-	1,500.00
8-16	15 EA	180.00	Plugged Service	11	-0-	0 11	-0-	1,980.00
8-17	5 EA	100.00	Tap Hole in existing Service			-0-		

ITEM NO.	ESTIMATED QUANTITY	UNIT PRICE	IDENTIFICATION	PREV. TOTAL	MONTHLY TOTAL	TOTAL TO DATE	AMOUNT DUE	TOTAL AMOUNT TO DATE
8-18	1 EA	1,000.00	Unscheduled Remobilization and demobilization			-0-		
9-1	60 LF	15.00	3-Inch or 4-Inch C.I. Water Pipe Including Excavation	7.5	-0-	7.5	-0-	112.50
9-2	200 LF	20.00	6-Inch Water Pipe Including Excavation	188	-0-	188	-0-	3,760.00
9-3	500 LF	25.00	8-Inch C.I. Water Pipe Including Excavation	459.7	-0-	459.7	-0-	11,492.50
9-4	60 LF	50.00	12-Inch C.I. Water Pipe Including Excavation	241.5	-0-	241.5	-0-	12,075.00
9-5	50 LF	60.00 45.00 Change Order No. 2	16-Inch C.I. Water Pipe Including Excavation	103.58	Change Order #2 40.21	143.79	1,809.45	8,024.25
9-6	40 LF	70.00	20-Inch C.I. Water Pipe Including Excavation	31.5	-0-	31.5	-0-	2,205.00
9-7	20 LF	80.00	24-Inch C.I. Water Pipe Including Excavation	18.8	-0-	18.8	-0-	1,504.00
9-8	20 LF	100.00	30-Inch C.I. Water Pipe Including Excavation	48.2	10.25	58.45	1,025.00	5,845.00
9-9	3,000 LBS	4.65 1.00	Additional Fittings Change Order No. 2	20,915.50	Change Order #2 1,371.75	22,287.25	1,371.75	98,628.82
9-10	4 EA	500.00	3-Inch or 4-Inch Gate Complete in place	3	-0-	3	-0-	1,500.00
9-11	13 EA	1500.00	6-Inch Gate complete in place	19	-0-	19	-0-	28,500.00

SITE PREPARATION CONTRACT "V"

DATE: April 24, 1973

EM O.	ESTIMATED QUANTITY	UNIT PRICE	IDENTIFICATION	PREV. TOTAL	MONTHLY TOTAL	TOTAL TO DATE	AMOUNT DUE	TOTAL AMOUNT TO DATE
-12	2 EA	1,700.00	8-Inch Gate, complete in place	4	-0-	4	-0-	6,800.00
-13	24 EA	1,900.00	12-Inch Gate, complete in place	35	-0-	35	-0-	66,500.00
-14	14 EA	2,200.00	16-Inch Gate, complete in place	15	5	20	11,000.00	44,000.00
-15	5 EA	3,000.00	20-Inch Butterfly Valve complete in place	5	-0-	5	-0-	15,000.00
-16	4 EA	3,500.00	24-Inch Butterfly Valve complete in place	3	-0-	3	-0-	10,500.00
-17	4 EA	5,000.00	30-Inch Buttertly Valve complete in place	4	1	5	5,000.00	25,000.00
-18	470 LF	10.00	3/4-Inch Copper Service Pipe including excavation	61	-0-	61	-0-	610.00
-19	80 LF	11.00	1-Inch Copper Service Pipe including excavation	10	-0-	10	-0-	110.00
-20	60 LF	12.00	1-1/2-Inch Copper Service Pipe including excavation			-0-		
-21	40 LF	13.00	2-Inch Copper Service Pipe Including excavation	70	-0-	70	-0-	910.00
-22	20 EA	100.00	3/4-Inch Corporation Stop complete in place	8	-0-	8	-0-	800.00
-23	4 EA	125.00	1-Inch Corporation Stop complete in place			-0-		

SITE PREPARATION CONTRACT "

DATE: April 24, 1973

ITEM NO.	ESTIMATED QUANTITY	UNIT PRICE	IDENTIFICATION	PREV. TOTAL	MONTHLY TOTAL	TOTAL TO DATE	AMOUNT DUE	TOTAL AMOUNT TO DATE
9-24	3 EA	500.00	1-1/2-Inch Corporation Stop complete in place	1	-0-	1	-0-	500.00
9-25	2 EA	800.00	1-1/2-Inch Corporation Stop with 1-1/2-Inchx2-Inch Adaptor complete in place	5	-0-	5	-0-	4,000.00
9-26	20 EA	150.00	3/4-Inch Curb Stop	6	-0-	6	-0-	900.00
9-27	3 EA	160.00	1-Inch Curb Stop			-0-		
9-28	10 EA	285.00	Remove & Reset existing Water Meter			-0-		
9-29			Unassigned					
9-30	13 EA	400.00	Hydrants	14	-0-	14	-0-	5,600.00
9-31	1 EA	800.00	Hydrants Removed			-0-		
10-1	100 CY	35.00	Cement Concrete Masonry	14.8	1.25	16.05	43.75	561.75
11-1	1,900 SY	2.00	3-Inch Temporary Bituminous Pavement	759.14	89.04	848.18	178.08	1,696.36
11-2	500 SY	3.00	3-Inch Cold Patch Paving	189.98	3.78	193.76	11.34	581.28
11-3	20 SY	100.00	Brick Sidewalks & Gutters Removed & Reset			-0-		

SITE PREPARATION CONTRACT "V"

DATE: April 24, 1973

EM O.	ESTIMATED QUANTITY	UNIT PRICE	IDENTIFICATION	PREV. TOTAL	MONTHLY TOTAL	TOTAL TO DATE	AMOUNT DUE	TOTAL AMOUNT TO DATE
2-1	1 LS	2,000.00	Engineer's Field Office	100%	-0-	100%	-0-	2,000.00
13-1	2,600 HRS	6.75	Special Duty Police	2,429	137	2,566	924.75	17,320.50
13-2	160 HRS	8.25	Special Duty Police Sergeant			-0-		
9-32	Change Order #1	3,750.00	30-inch x 12-inch Tapping Sleeve and Valve.	1	-0-	1	-0-	3,750.00
9-33	Change Order #1	1,800.00	10-inch Gate Valve	1	-0-	1	-0-	1,800.00
-34	Change Order #1	37.50	10-inch C.I. Pipe	4.5	-0-	4.5	-0-	168.75
-35	Change Order #1	Lump Sum	30"x12" Tee	1	1	2	1,271.95	2,543.90

Total Amount Due to Date	$ 939,293.84
Total Billed Under Previous Invoices	845,181.07
Amount Billed Under this Invoice	94,112.77
Less 10%	9,411.28
Payment Due	$ 84,701.49

CHARLES A. MAGUIRE & ASSOC. INC.

Signed: [signature]

Sheet and Mass

P -- 55 Project

6-9-70

SITE PREP I

SHT 1 OF 2

Item	Unit	Name of Item	ENGINEER'S EST. EST. QUAN.	ENGINEER'S EST. UNIT PRICE	ENGINEER'S EST. TOTAL PRICE	SPINIELLO CONSTR. FINAL QUAN.	SPINIELLO CONSTR. UNIT PRICE	SPINIELLO CONSTR. TOTAL PRICE
1	LF	Replacing exist 8"Water P	465	25-	11625-	474	25-	11850-
1-2	LF	Relaying 24" Water Pipe	20	6-	120-	0	1-	0
1-3	LF	Relaying 16" Water Pipe	100	6-	600-	90	1-	90-
1-4	LF	Relaying 12" Water Pipe	100	5-	500-	56	1-	56-
1-5	LF	Relaying 10" Water Pipe	30	4-	120-	28	1-	28-
1-6a	LF	Relaying 8" Water Pipe	80	4-	320-	116	1-	116-
1-6b	LF	Relaying 6" Water Pipe	200	4-	800-	138	1-	138-
1-6c	LF	Relaying 4" Water Pipe	20	4-	80-	20	1-	20-
1-7	LF	3/4",1",1½, or 2" Copper	150	20-	3000-	137	20-	2740-
1-9	LB	Castings	5000	0.05	250-	2000	0.01	20-
1-10	EA	2" or 3" Tapped Saddles	10	500-	5000-	26	500-	13000-
1-11	EA	24" Gates	1	3000-	3000-	2	4000-	8000-
1-12a	EA	16" Gates	16	1725-	27600-	21	1600-	33600-
1-12b	EA	12" Gates	21	575-	12075-	14	200-	2800-
1-12c	EA	10" Gates	15	575	8025-	7	150-	1050-
1-12d	EA	8" Gates	32	575-	18400-	25-	100-	2500-
1-12e	EA	6" Gates	20	575-	11500	19	80-	1520-
1-12f	EA	4" Gates	3	575-	1725-	3	50-	150-
1-13	EA	Fire Hydrants	10	600-	6000-	23	1600-	34400-
1-14	LF	Cleaning & Lining 24"	535	10-	5350-	6212.6	17-	77364
1-15a	LF	Cleaning & Lining 16"	6780	8-	54240-	7370	5-	36850-
1-15b	LF	Cleaning & Lining 12"	4970	7.50	37275-	4668	5-	23340-
1-15c	LF	Cleaning & Lining 10"	2850	7.50	21375-	2644	5-	13220-
1-15d	LF	Cleaning & Lining 8"	6710	7.50	50325-	6628	5-	33140-
1-16a	LF	4" Domestic Bypass	25000	4-	100000-	29132	3-	87396-
1-16b	LF	4" Fire Bypass	28000	3.20	89600-	28369	2.75	78014.75
1-17	LF	2" Domestic Bypass	6000	2.90	17400-	6222	1.50	9333-

Quantities Checked JJO

Extension Checked JJO

Above items of work certified to as being satisfactorily performed

SITE PREP "I" SHT 2 of 2

CHARLESTOWN, MASS

R-55 Project

Date 6-9-70

Item No.	Unit	Name of Item	ENGINEERS EST. EST. QUAN.	ENGINEERS EST. UNIT PRICE	ENGINEERS EST. TOTAL PRICE	SPINIELLO CONSTR. FINAL QUAN.	SPINIELLO CONSTR. UNIT PRICE	SPINIELLO CONSTR. TOTAL PRICE
1-18	ea	Temp. Fire Hydrants	75	230-	17250-	142	310-	44020-
1-19	ea	Obstructions	20	500-	10000-	20	500-	10000-
1-20	ea	Plugged Services	30	335-	10050-	54	500-	27000-
2-1	cy	Excavation (outside trench	150	30-	4500-	100.9	30-	3027-
2-2	cy	Excavation (below grade)	50	1-	50-	26.6	1-	26.60
2-3	ton	Gravel Refill	1000	11.50	11500-	2316	12-	27792-
2-4	cy	Rock Excavation	50	25-	1250-	184.4	30-	5532-
5-1	sy	Asphalt Patching	700	8-	5600-	1163.9	30-	34917-
8-1	Hr.	Special Duty Police	—	-	5000-	17433	4.50	7845-
					551.505			630.695.35
						C.O. #3		33,763.86
								664,659.21

Entries Checked [illegible]

Extension Checked [illegible]

Above items of work certified to as being satisfactorily performed

M & C Division
Browning-Ferris Industries, Inc.
100 HALLET STREET, DORCHESTER, MASS. 02124 · 617 265-0500

July 7, 1975

Boston Redevelopment Authority
Room 919
City Hall
Boston, Massachusetts

Attn: Mr. Robert T. Kenney, Director

Re: Contract M-1
Project R-56
South End

Gentlemen:

This company, M & C Division, Browning-Ferris Industries, Inc. (Mass.), intends to protest any attempt by the Authority to award Site Preparation Contract "M-1" for "New Water Mains and Cleaning and Cement Lining of Water Mains", South End Project #R-56, Boston, Massachusetts to the apparent low bidder, the Spiniello Co.

Contract M-1 was bid on July 3, 1975. The results as read were:

Spiniello Co.	$1,584,898.00
M & C Division, Browning-Ferris Industries, Inc.	$1,591,145.00

This is a difference of $6,247.00

Article #13 on Page #6 of the Contract Special Provisions in Paragraph #1, second sentence states "Bids shall not contain abnormally high or abnormally low prices for any class or item of work."

The Spiniello Co. bid a unit price of one cent ($.01) on the following items:

Item 6-1	3800 cy Rock Excavation @ .01	$ 38.00
7-1	12,000 cy Bank Gravel @ .01	120.00
9-6	13,000 lbs additional Fittings @ .01	730.00
11-1	11,000 sy Temporary Bituminous Paving @ .01	110.00
	TOTAL	$998.00

Boston Redevelopment Authority
Attn: Mr. Robert T. Kenney, Director
Re: Contract M-1, Project R-56, South End

July 7, 1975

It is obvious that the above items cannot be performed for the price which Spiniello has bid and this represents a flagrant abuse of Article #13 as mentioned above.

Using a balanced bid as required by the Contract, although we are just as cognizant that the probabilities that these items might underrun somewhat, M & C Division bid on the same items as follows:

Item 6-1	3800 cy Rock Excavation @ 35.00	$133,000.00
7-1	12,000 cy Gravel Borrow @ 4.25	51,000.00
9-6	73,000 cy Additional Fittings @ 1.20	87,600.00
11-1	11,000 sy Temporary Bituminous Paving @ 8.50	93,500.00
	TOTAL	$365,100.00

The difference of $364,102.00 is reflected in abnormally high prices in Water Gates and the installation of the new water pipes of various sizes. Based on our take-off of quantities award of Contract M-1 to the Spiniello Co. will cost the Boston Redevelopment Authority possibly as much as Two Hundred Thousand Dollars ($200,000.00) over what the final quantities will cost if award is made to M & C Division.

We feel it is the duty and obligation of the Authority to take cognizance of Spiniello's extraordinarily unbalanced bid and to make the award of this contract to the lowest qualified bidder, M & C Division, who has met and fulfilled all requirements of the proposal.

Very truly yours,

M & C Division
BROWNING-FERRIS INDUSTRIES, INC.

Joseph N. Verrochi

Joseph N. Verrochi
Vice President

M & C Division
Browning-Ferris Industries, Inc.

July 21, 1975

Boston Redevelopment Authority
Room 919
City Hall
Boston, Massachusetts

ATTN: Mr. Robert T. Kenney, Director

Gentlemen:

RE: Contract M+1, Project R-56, South End

Attached please find copies of the estimated final quantities for this contract which have been worked out in two (2) methods.

Exhibit "A" shows proposed final quantities which give the maximum quantities per the Contract Plans and Specifications.

Exhibit "B" shows proposed final quantities for this Contract based on field observations of construction methods now being employed on the abutting Contract L-1 which is in all ways completely similar to Contract M-1.

We have allowed, in our evaluation, provisions for 3/4" copper services to the 67 structures shown by the plans as "No Record" so as to present a completely true evaluation of the final Contract quantities.

Also attached please find a summary of our quantity take-off for Items 6-1, 7-1, 9-6 and 11-1 which represents the major monetary position of the Spiniells Company's abnormally low unit bids.

We feel our evaluation represents a true picture of the final costs and the results show that the Authority will be offered a savings of $81,725.83 if the quantities run to the maximum possible, but the probabilities are that the actual final savings will be $150,028.84 based on our field measurements of Contract L-1.

It must be noted that although the old City of Boston cobblestones were from 6" - 8" thick we have taken the entire length of pipe to be placed in the streets and have computed the cobbles or concrete base as being consistently 9" thick. This is most unlikely and the potential savings which can be offered in that item can be noted in the amount of money still allowed in our computations.

We feel that we have been very conservative in our computations and also that the results dramatize the effects of the Spiniello's abnormally high and low unit prices.

Very truly yours,

M & C DIVISION
BROWNING-FERRIS INDUSTRIES, INC.

Richard V. McDermott
General Superintendent

RVM/dae

Attachments

Boston Redevelopment Authority

Quantities per Exhibit "A" Contract M-1

Rock Excavation Item 6-1

16055 lf Pipe
- 3320 lf in Sidewalks
13335 lf x 5' x .75/27 = 1852 cy

Holes for Cement lining
50 ea x 9 x 5 x .75/27 = 63

Holes for New Valves
60 ea x 6 x 6 x .75/27 = 60

A&E Misc for Temp Pipes etc 200

2175 cy

Gravel Borrow Item 7-1

Pipe - 16055 lf x 5.75 x 2.67 (Ave width)/27 = 9129 cy

Holes - Cement lining
50 ea x 9 x 5 x 6' (Depth)/27 = 500 cy

Holes for Valves
60 ea x 6 x 6 x 5.75/27 = 460 cy

10089 cy

Pwing - Item 11-1

Pipe 16055 x 5 (width) ÷ 9 = 8919 sy
Cement lining - 50 x 9 x 5/9 = 250
Valves - 60 x 6 x 6/9 = 240
9409

A&E for Misc Temp Pipe etc 500

9909 sy

Boston Redevelopment Authority

Contract NI-1

Quantities for Exhibit "A" and "B"

Additional Fittings

Item 9-6

	Quantity	Weight per Unit	Total
8 x 8 Cross	1	335	335
8 x 8 Tee	7	260	1820
8 x 6 Tee	9	241	2169
8 x 6 Reducer	13	136	1768
8 x 4 Tee	1	200	200
8" Bends	21	160	3360
12 x 8 Reducer	5	230	1150
12 x 10 Reducer	15	260	3900
12 x 12 Cross	8	655	5240
12 x 8 Cross	3	515	1545
10 x 8 Tee	8	445	3560
12 x 12 Tee	11	530	5830
12 x 6 Tee	3	421	1263
12" Bends	19	295	5605
10 x 8 Reducer	2	190	380
12 x 6 Reducer	1	206	206
6" Bends	2	107	214
12 x 4 Tee	1	365	365
12" Sleeves	60	225	13500
		Total Fittings	52410 #

y offers to provide all necessary machinery, tools an
he materials called for by the Contract Documents o
ie prescribed and according to the requirements of th
to complete the work within one hundred eighty cal

Item #	Revised Quantity	ITEM WITH UNIT BID PRICE IN WORDS	D	Unit	Total	Unit	Total
6-1	2175	Cubic yards of Rock Excavation including disposal, at Per Cubic Yard		01	21.75	35	76125
6-2	300	Cubic yards of Test Pits and Miscellaneous Excavation and refilling, at Per Cubic Yard		10	3000	15	4500
6-3	100	Cubic yards of Earth Excavation Below Grade, at Per Cubic Yard		20	2000	25	2500
6-4	1 TOKEN	Remove Existing Water Line Main Valve 6-Inches or Greater on Water Lines to be Abandoned, at Seven Hundred Dollars and No Cents Each		700	700	700	700
6-5	1 TOKEN	Remove Existing Service Gate or Meter in Street Boxes, on services to be abandoned, at One Hundred Fifty Dollars and No Cents Each		150	150	150	150
6-6	1 TOKEN	Remove Existing Blow-Off and Plug Tee at Main, at Six Hundred Dollars and No Cents Each		600	600	600	600

	Each "A"		ITEM WITH UNIT BID PRICE IN WORDS	Unit	Total	Unit	Total
7-1	10089	C	Cubic Yards of Bank Gravel refill, as authorized by the Engineer, and for all trench refill except as otherwise directed by the Engineer, at Per Cubic Yard	01	100.89	4.25	42878.25
7-2	500	C	Cubic Yards of Grading Size No. 67 Crushed Stone, (3/4-inch to No. 4) furnished and placed by the authority of the Engineer, at Per Cubic Yard	8.00	4000.00	8.50	4250.00
8-1	180	L	Linear feet of furnished and laying 2-Inch Temporary Bypass Pipe for Domestic Service, including temporary services, maintenance, fittings, valves, removal and all incidental work, at Per Linear Foot	4.00	720.00	3.50	630.00
8-2	24420	L	Linear feet of furnishing and laying 4-Inch Temporary Bypass Pipe for Domestic Service, including temporary services, maintenance, fittings, valves, removal and all incidental work, at Per Linear Foot	6.00	146520.00	5.50	134310.00
8-3	16482	L	Linear feet of furnishing and laying 4-Inch Temporary Bypass Pipe for Fire Protection, including temporary services, maintenance, fittings, valves, removal and all incidental work, at Per Linear Foot	5.00	82410.00	5.50	90651.00
8-4	490	L	Linear feet of furnishing and laying 6-Inch Temporary Bypass Pipe for Fire or Domestic Service, including temporary services, maintenance, fittings, valves, removal and all incidental work, at Per Linear Foot	9.00	4410.00	8.00	3920.00

	Exh "A" Yds	ITEM WITH UNIT BID PRICE IN WORDS	C Unit	Total	Unit	Total
8-5	96	Furnish and install Temporary Fire Hydrants, complete, including tee branch, temporary service pipe, valves, fittings, maintenance, removal and all incidental work, at Each	350.00	33600.00	125.00	12000.00
8-6	1 TOKEN	Furnish and set 12-inch x 4-inch or 12-inch x 6-inch Tapping Sleeve and Valve, complete, including excavation, temporary bypass line and all connections, removal, refilling, and all incidental work, at One Thousand Five Hundred Dollars and No Cents Each	1500.00	1500.00	1500.00	1500.00
8-7	3685	Cleaning and Cement Lining 8-Inch Cast Iron Water Pipe, complete, including excavation, refilling and all incidental work, at Per Linear Foot	14.00	51590.00	15.00	55275.00
8-8	10400	Cleaning and Cement Lining 12-Inch Cast Iron Water Pipe, complete, including excavation, refilling and all incidental work, at Per Linear Foot	18.00	187200.00	16.20	168480.00
8-9	390	Cleaning and Cement Lining 20-Inch Cast Iron Water Pipe, complete, including excavation, refilling and all incidental work, at Per Linear Foot	22.00	8580.00	22.00	8580.00
8-10	15 TOKEN 1	Obstruction in Pipes To Be Cleaned and Cement Lined, complete, including excavation, removal and connections, refilling, and all incidental work, at One thousand Dollars and No Cents Each	1000.00	15000.00	1000.00	15000.00

		ITEM WITH UNIT BID PRICE IN WORDS	Unit	Total	Unit	Total
8-11	5	Plugged Service, complete, including excavations, removal and connections, refilling and all incidental work, at Two Hundred Fifty Dollars and No Cents Each	252.00	1260.00	250.00	1250
	TOKEN					
8-12	10	Tap Hole in Existing Service, complete, including excavation, tap connections, refilling and all incidental work, at Three Hundred Dollars and No Cents Each	300.00	3000.00	300.00	3000
	TOKEN					
8-13	1	Unscheduled Remobilization and Demobilization for additional work or work ordered out of sequence, at One Thousand Five Hundred Dollars and No Cents Each	1500.00	1500.00	1500.00	1500
	TOKEN					
9-1	290	Linear feet of trench and furnishing laying or furnishing and relaying of existing water pipe with 3-Inch or 4-Inch C.I. or D.I.C.L. Water Pipe, including all connections, refilling and all incidental work, at Per Linear Foot	40.00	11600.00	27.50	7975
9-2	441	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 6-Inch D.I.C.L. Water Pipe, including all connections, refilling and all incidental work, at Per Linear Foot	50.00	22050.00	30.00	13230
9-3	4442	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 8-Inch D.I.C.L. Water Pipe, including all connections, refilling and all incidental work, at Per Linear Foot	70.00	310940.00	42.50	188785

		ITEM WITH UNIT BID PRICE IN WORDS				
9-4	940	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 12-inch D.I.C.L. Water Pipe, including all connections, refilling and all incidental work, at Per Linear Foot	80 cc	75200	50 cc	47000
9-5	10 TOKEN	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 20-Inch D.I.C.L. Water Pipe, including all connections, refilling and all incidental work, at Forty Dollars and No Cents Per Linear Foot	40 cc	400 cc	40 cc	400 cc
9-6	52410 cc	Pounds of Additional Fittings, furnished and set, including all incidental work, at Per Pound	.01	524.10	1 cc	624.12
9-7	7	Furnish and set 3-Inch or 4-Inch Gate, complete in place, including box, excavation, removal of existing gate or pipe section, refilling and all incidental work, at Each	500 cc	3500 cc	300 cc	2100
9-8	37	Furnish and set 6-Inch Gate, complete in place, including box, excavation, removal of existing valve or pipe section, refilling and all incidental work, at Each	1000 cc	37000 cc	600 cc	22200
9-9	44	Furnish and set 8-Inch Gate, complete in place, including box, excavation, removal of existing valve or pipe section, refilling and all incidental work, at Each	1300 cc	57200 cc	800 cc	35200

	Est. Qty	ITEM WITH UNIT BID PRICE IN WORDS	Unit	Total	Unit	Total
9-	68	Furnish and set 12-Inch Gate, complete in place, including box, excavation, removal of existing valve or pipe section, refilling and all incidental work, at Each	1600.00	108800	1000.00	68000
		Not Applicable Each				
9-12	9010	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 3/4-Inch Copper Service Pipe, including all connections, refilling and all incidental work, at Per Linear Foot	21.00	189210.00	16.52	148665
9-13	629	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 1-Inch Copper Service Pipe, including all connections, refilling and all incidental work, at Per Linear Foot	25.00	15725.00	17.00	10693
9-14	249	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 1-1/2-Inch Copper Service Pipe, including all connections, refilling and all incidental work, at Per Linear Foot	27.00	6723.00	17.75	4419.75
9-15	54	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 2-Inch Copper Service Pipe, including all connections, refilling and all incidental work, at Per Linear Foot	30.00	1620.00	18.75	1012.50

	ITY	ITEM WITH UNIT BID PRICE IN WORDS	Unit	Total	Unit	Total
9-16	301	Furnish and set 3/4-Inch Corporation Stop, complete in place, including all drilling and tapping of the main, and all incidental work, at Each	70.00	21070.00	65.00	19565.00
9-17	16	Furnish and set 1-Inch Corporation Stop, complete in place, including all drilling and tapping of the main, and all incidental work, at Each	75.00	1200.00	70.00	1120.00
9-18	6	Furnish and set 1-1/2-Inch Corporation Stop, complete in place, including all drilling and tapping of the main, box, frame and cover, all all incidental work, at Each	100.00	600.00	155.00	930.00
9-19	11 (?)	Furnish and set 1-1/2-Inch Corporation Stop with 1-1/2" x 2" Adapter, complete in place, including all drilling and tapping of the main, box, frame and cover, and all incidental work, at Use Price (None Shown) Each	200.00	2200.00	200.00	2200.00
9-20	301	Furnish and set 3/4-Inch Curb Stop, complete in place, including all connections to services and all incidental work, at Each	120.00	36120.00	75.00	22575.00
9-21	16	Furnish and set 1-Inch Curb Stop, complete in place, including all connections to services and all incidental work, at Each	150.00	2400.00	80.00	1280.00

	QTY	ITEM WITH UNIT BID PRICE IN WORDS	Unit	Total	Unit	Total
9-22	1	Install New Water Meter, including all connections, additional hardware and all incidental work, at Fifty Dollars and No Cents Each	50.00	50.00	50.00	50
9-23	24	Hydrant, furnished and set, complete in place, including all necessary connections, removal of existing hydrant, if any, tie rods, refilling and all incidental work, at Each	1000.00	24000.00	800.00	192
9-24	1	Hydrant Removed, and not replaced, including all necessary excavation, refilling and all incidental work, at Six Hundred Dollars and No Cents Each	600.00	600.00	600.00	600
9-25	4	Adjust Valve or Corporation Stop Box to Grade including cleaning and excavation and backfill, at One Hundred Dollars and No Cents Each	100.00	400.00	100.00	400
9-26	4	Clean Valve or Corporation Stop Box, at Fifty Dollars and No Cents	50.00	200.00	50.00	200
9-27	14	Furnish and install Watertight Plug, complete in place, including excavation and backfill, at Each	600.00	8400.00	160.00	2240

		TY	ITEM WITH UNIT BID PRICE IN WORDS	Unit	Total	Unit	Tot
[illegible]-1	100		Cubic yards of Cement Concrete Masonry for pipe restraint, encasement, or for any other purpose as directed, including reinforcing steel and all incidental work, at Per Cubic Yard	40 00	4000 00	65 00	650
11-1	9909		Square yards of 3-inch Temporary Bituminous Pavement, at Per Square Yard	01	99.09	8 50	8422
11-2	150		Tons of 3-Inch Cold Patch Paving, at Per Ton	40 00	6000 00	53 00	7500
11-3	5 TOKEN		Remove and Reset Existing Brick Sidewalk or Gutter, complete in place, at Sixty Dollars and No Cents Per Square Yard	60 00	300 00	60 00	300
11-4	5 TOKEN		Remove and Replace Mortared Brick Sidewalk or Gutter, at Twenty Dollars and No Cents Per Cubic Foot	20 00	100 00	20 00	100
12-1	1		Engineer's Field Office, complete, including equipment, utilities and services, maintenance and fencing, at Lump Sum	10000 -	10000 -	15000 -	15000

ITEM WITH UNIT BID PRICE IN WORDS					
13-1 2300 — Hours of Special Duty Police supplied by the Contractor, at Nine Dollars Per Hour		9.00	20700.00	9.00	20700
13-2 100 — Hours of Special Duty Police Sergeant supplied by the Contractor, at Eight Dollars and Twenty-Five Cents Per Hour		8.25	825.00	8.25	825.00
TOTAL - SITE PREPARATION CONTRACT "M			1527608.53		144588

In accordance with common practice, where a qu
use of the item is either not anticipated or no est
made, but the item is included to establish a pric
usually in the event such work is required owing

Payment under those items for which quantities a
shall constitute full payment for all of the work i
as indicated on the Drawings and delineated in t

In case of a discrepancy between the unit prices
prices written in figures, the written words shall

If water services are replaced by "pulling throug
quantities of Rock Excavation, Bank Gravel and
less than those shown on this Bid Proposal.

Mtc Lower by
$81725.83

Boston Redevelopment Authority

Quantities for Exhibit "B" Contract M-1

Rock Excavation — Item 6-1

16055 lf Pipe
- 3320 lf in Sidewalks
13335 lf x 3 x .75/27 — 1111 cy

Cement Lining Holes
50 ea x 9 x 5 x .75/27 — 63 cy

Holes for New Valves
60 ea x 5 x 5 x .75/27 — 42 cy

Misc for Temp Pipes etc — 200 cy

1416 cy

Gravel Borrow — Item 7-1

Pipe 16055 x 3.5 x .83/27 — 1727

Cement Lining Holes
50 ea x 9 x 5 x .83/27 — 69

Valve Holes
60 ea x 5 x 5 x .83/27 — 46

Possible Replacement of Unsuitable Mat'l (50%)
16055 x 3 x .95 x 50%/27 — 4905

6747 cy

Paving — Item 11-1

Pipe 16055 x 3.5/9 — 6244 sy

Cement Lining Holes 50 ea x 9 x 5/9 — 250

Valve Holes 60 ea x 5 x 5/9 — 167

6661 s

Boston Redevelopment Authority

Contract M-1

Quantities for Exhibit "A" and "B"

Additional Fittings

Item 9-6

	Quantity	Weight per unit	Total
8 x 8 Cross	1	335	335
8 x 8 Tee	7	260	1820
8 x 6 Tee	9	241	2169
8 x 6 Reducer	13	136	1768
8 x 4 Tee	1	200	200
8" Bends	21	160	3360
12 x 8 Reducer	5	230	1150
12 x 10 Reducer	15	260	3900
12 x 12 Cross	8	655	5240
12 x 8 Cross	3	515	1545
12 x 8 Tee	8	445	3560
12 x 12 Tee	11	530	5830
12 x 6 Tee	3	421	1263
12" Bends	19	295	5605
10 x 8 Reducer	2	190	380
12 x 6 Reducer	1	206	206
6" Bends	2	107	214
12 x 4 Tee	1	365	365
12" Sleeves	60	225	13500
		Total Fittings	52410 #

Exhibit "B" PROPOSAL - BIDDER'S FORM

y offers to provide all necessary machinery, tools an
the materials called for by the Contract Documents o
ne prescribed and according to the requirements of th
to complete the work within one hundred eighty cal

Revised

Item #	Quantity	ITEM WITH UNIT BID PRICE IN WORDS	D	Unit	Total	Unit	Total
6-1	1416	Cubic yards of Rock Excavation including disposal, at Per Cubic Yard		01	1416	35cc	4956cc
6-2	300	Cubic yards of Test Pits and Miscellaneous Excavation and refilling, at Per Cubic Yard		10cc	3000cc	15cc	4500
6-3	100	Cubic yards of Earth Excavation Below Grade, at Per Cubic Yard		20cc	2000cc	25cc	2500
6-4	1	Remove Existing Water Line Main Valve 6-Inches or Greater on Water Lines to be Abandoned, at Seven Hundred Dollars and No Cents Each		700cc	700cc	700cc	700cc
TOKEN							
6-5	1	Remove Existing Service Gate or Meter in Street Boxes, on services to be abandoned, at One Hundred Fifty Dollars and No Cents Each		150cc	150cc	150cc	150
TOKEN							
6-6	1	Remove Existing Blow-Off and Plug Tee at Main, at Six Hundred Dollars and No Cents Each		600cc	600cc	600cc	600
TOKEN							

	Quantity	ITEM WITH UNIT BID PRICE IN WORDS	Unit	Total	Unit	Total
7-1	6747	Cubic Yards of Bank Gravel refill, as authorized by the Engineer, and for all trench refill except as otherwise directed by the Engineer, at Per Cubic Yard	01	67.47	4 25	28674
7-2	500	Cubic Yards of Grading Size No. 67 Crushed Stone, (3/4-inch to No. 4) furnished and placed by the authority of the Engineer, at Per Cubic Yard	8 00	4000 00	8 52	4252
8-1	180	Linear feet of furnished and laying 2-Inch Temporary Bypass Pipe for Domestic Service, including temporary services, maintenance, fittings, valves, removal and all incidental work, at Per Linear Foot	4 00	720 00	3 50	630
8-2	24420	Linear feet of furnishing and laying 4-Inch Temporary Bypass Pipe for Domestic Service, including temporary services, maintenance, fittings, valves, removal and all incidental work, at Per Linear Foot	6 00	146520 00	5 52	134310
8-3	16482	Linear feet of furnishing and laying 4-Inch Temporary Bypass Pipe for Fire Protection, including temporary services, maintenance, fittings, valves, removal and all incidental work, at Per Linear Foot	5 00	82410 00	5 52	90651
8-4	490	Linear feet of furnishing and laying 6-Inch Temporary Bypass Pipe for Fire or Domestic Service, including temporary services, maintenance, fittings, valves, removal and all incidental work, at Per Linear Foot	9 00	4410 00	8 00	3920

	Est "B"	Y	ITEM WITH UNIT BID PRICE IN WORDS	C	Unit	Total	Unit	Total
8-5	96		Furnish and install Temporary Fire Hydrants, complete, including tee branch, temporary service pipe, valves, fittings, maintenance, removal and all incidental work, at Each		350.00	33600.00	125.00	12000.00
8-6	1		Furnish and set 12-inch x 4-inch or 12-inch x 6-inch Tapping Sleeve and Valve, complete, including excavation, temporary bypass line and all connections, removal, refilling, and all incidental work, at One Thousand Five Hundred Dollars and No Cents Each		1500.-	1500.00	1500.00	1500.00
	TOKEN							
8-7	3685		Cleaning and Cement Lining 8-Inch Cast Iron Water Pipe, complete, including excavation, refilling and all incidental work, at Per Linear Foot		14.00	51590.00	15.00	55275.00
8-8	10400		Cleaning and Cement Lining 12-Inch Cast Iron Water Pipe, complete, including excavation, refilling and all incidental work, at Per Linear Foot		18.00	187200.00	16.20	168480.00
8-9	390		Cleaning and Cement Lining 20-Inch Cast Iron Water Pipe, complete, including excavation, refilling and all incidental work, at Per Linear Foot		22.00	8580.00	22.00	8580.00
8-10	15		Obstruction in Pipes To Be Cleaned and Cement Lined, complete, including excavation, removal and connections, refilling, and all incidental work, at One thousand Dollars and No Cents Each		1000.00	15000.00	1000.00	15000.00
	TOKEN	1						

		ITEM WITH UNIT BID PRICE IN WORDS	Unit	Total	Unit	Total
8-11	5 TOKEN	Plugged Service, complete, including excavations, removal and connections, refilling and all incidental work, at Two Hundred Fifty Dollars and No Cents Each	250.00	1250.00	250.00	1250
8-12	10 TOKEN	Tap Hole in Existing Service, complete, including excavation, tap connections, refilling and all incidental work, at Three Hundred Dollars and No Cents Each	300.00	3000.00	300.00	3000
8-13	1 TOKEN	Unscheduled Remobilization and Demobilization for additional work or work ordered out of sequence, at One Thousand Five Hundred Dollars and No Cents Each	1500.00	1500.00	1500.00	1500
9-1	290	Linear feet of trench and furnishing laying or furnishing and relaying of existing water pipe with 3-Inch or 4-Inch C.I. or D.I.C.L. Water Pipe, including all connections, refilling and all incidental work, at Per Linear Foot	40.00	11600.00	27.50	7975
9-2	441	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 6-Inch D.I.C.L. Water Pipe, including all connections, refilling and all incidental work, at Per Linear Foot	50.00	22050.00	30.00	13230
9-3	4442	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 8-Inch D.I.C.L. Water Pipe, including all connections, refilling and all incidental work, at Per Linear Foot	70.00	310940.00	42.50	188785

	Est. Qty.	ITEM WITH UNIT BID PRICE IN WORDS	Unit	Total	Unit	Total
9-4	940	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 12-inch D.I.C.L. Water Pipe, including all connections, refilling and all incidental work, at Per Linear Foot	80 00	75200 00	50 00	47000
9-5	10 TOKEN	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 20-Inch D.I.C.L. Water Pipe, including all connections, refilling and all incidental work, at Forty Dollars and No Cents Per Linear Foot	40 00	400 00	40 00	400 00
9-6	2410	Pounds of Additional Fittings, furnished and set, including all incidental work, at Per Pound	01	24 10	1 20	6892
9-7	7	Furnish and set 3-Inch or 4-Inch Gate, complete in place, including box, excavation, removal of existing gate or pipe section, refilling and all incidental work, at Each	500 00	3500 00	300 00	2100 00
9-8	37	Furnish and set 6-Inch Gate, complete in place, including box, excavation, removal of existing valve or pipe section, refilling and all incidental work, at Each	1000 00	37000 00	600 00	22200
9-9	44	Furnish and set 8-Inch Gate, complete in place, including box, excavation, removal of existing valve or pipe section, refilling and all incidental work, at Each	1300 00	57200 00	800 00	35200

	Col "B" QTY	ITEM WITH UNIT BID PRICE IN WORDS	Unit	Total	Unit	Total
9-10	68	Furnish and set 12-Inch Gate, complete in place, including box, excavation, removal of existing valve or pipe section, refilling and all incidental work, at Each	1600.00	108800.00	1000.00	68000.00
		Not Applicable Each				
9-12	9010	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 3/4-Inch Copper Service Pipe, including all connections, refilling and all incidental work, at Per Linear Foot	21.00	189210.00	16.50	148665.00
9-13	629	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 1-Inch Copper Service Pipe, including all connections, refilling and all incidental work, at Per Linear Foot	25.00	15725.00	17.00	10693.00
9-14	249	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 1-1/2-Inch Copper Service Pipe, including all connections, refilling and all incidental work, at Per Linear Foot	27.00	6723.00	17.75	4419.75
9-15	54	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 2-Inch Copper Service Pipe, including all connections, refilling and all incidental work, at Per Linear Foot	30.00	1620.00	18.75	1012.50

	Est'd Q'ty	ITEM WITH UNIT BID PRICE IN WORDS	Unit	Total	Unit	Total
-16	301	Furnish and set 3/4-Inch Corporation Stop, complete in place, including all drilling and tapping of the main, and all incidental work, at Each	70.00	21070.00	65.00	19565.00
-17	16	Furnish and set 1-Inch Corporation Stop, complete in place, including all drilling and tapping of the main, and all incidental work, at Each	75.00	1200.00	70.00	1120.00
-18	6	Furnish and set 1-1/2-Inch Corporation Stop, complete in place, including all drilling and tapping of the main, box, frame and cover, all all incidental work, at Each	100.00	600.00	155.00	930.00
-19	11 (3)	Furnish and set 1-1/2-Inch Corporation Stop with 1-1/2" x 2" Adapter, complete in place, including all drilling and tapping of the main, box, frame and cover, and all incidental work, at Use Price (None Shown) Each	200.00	2200.00	200.00	2200.00
-20	301	Furnish and set 3/4-Inch Curb Stop, complete in place, including all connections to services and all incidental work, at Each	120.00	36120.00	75.00	22515.00
-21	16	Furnish and set 1-Inch Curb Stop, complete in place, including all connections to services and all incidental work, at Each	150.00	2400.00	80.00	1280.00

	QTY	ITEM WITH UNIT BID PRICE IN WORDS	Unit	Total	Unit	Total
9-22	1 TOKEN 1	Install New Water Meter, including all connections, additional hardware and all incidental work, at Fifty Dollars and No Cents Each	50.00	50.00	50.00	50.00
9-23	24	Hydrant, furnished and set, complete in place, including all necessary connections, removal of existing hydrant, if any, tie rods, refilling and all incidental work, at Each	1000.00	24000.00	800.00	19200
9-24	1 TOKEN	Hydrant Removed, and not replaced, including all necessary excavation, refilling and all incidental work, at Six Hundred Dollars and No Cents Each	600.00	600.00	600.00	600
9-25	4 TOKEN 1	Adjust Valve or Corporation Stop Box to Grade including cleaning and excavation and backfill, at One Hundred Dollars and No Cents Each	100.00	400.00	100.00	400
9-26	4 TOKEN	Clean Valve or Corporation Stop Box, at Fifty Dollars and No Cents	50.00	200.00	50.00	200
9-27	14	Furnish and install Watertight Plug, complete in place, including excavation and backbill, at Each	600.00	8400.00	160.00	2240

		ITEM WITH UNIT BID PRICE IN WORDS	Spinello Unit	Spinello Total	Unit	Total
10-1	100	Cubic yards of Cement Concrete Masonry for pipe restraint, encasement, or for any other purpose as directed, including reinforcing steel and all incidental work, at Per Cubic Yard	40.00	4000.00	65	6500.00
11-1	6661	Square yards of 3-inch Temporary Bituminous Pavement, at Per Square Yard	.01	66.61	8.50	56618.50
11-2	150	Tons of 3-Inch Cold Patch Paving, at Per Ton	40.00	6000.00	50.00	7500.00
11-3	5	Remove and Reset Existing Brick Sidewalk or Gutter, complete in place, at Sixty Dollars and No Cents Per Square Yard	60.00	300.00	60.00	300.00
	TOKEN					
11-4	5	Remove and Replace Mortared Brick Sidewalk or Gutter, at Twenty Dollars and No Cents Per Cubic Foot	20.00	100.00	20.00	100.00
	TOKEN					
12-1	1	Engineer's Field Office, complete, including equipment, utilities and services, maintenance and fencing, at Lump Sum	10000.00	10000.00	15000.00	15000.00

Exh "B"

REVISED COPY - Adde

		ITEM WITH UNIT BID PRICE IN WORDS	Unit	Total	Unit	Total
13-1	2300	Hours of Special Duty Police supplied by the Contractor, at Nine Dollars Per Hour	9.00	20700.00	9.00	20700.00
13-2	100	Hours of Special Duty Police Sergeant supplied by the Contractor, at Eight Dollars and Twenty-Five Cents Per Hour	8.25	825.00	8.25	825.00
		TOTAL - SITE PREPARATION CONTRACT "M-		1,527,535.34		1377506

In accordance with common practice, where a qu
use of the item is either not anticipated or no est
made, but the item is included to establish a pric
usually in the event such work is required owing

Payment under those items for which quantities a
shall constitute full payment for all of the work r
as indicated on the Drawings and delineated in t

In case of a discrepancy between the unit prices
prices written in figures, the written words shall

If water services are replaced by "pulling throug
quantities of Rock Excavation, Bank Gravel and
less than those shown on this Bid Proposal.

MTC however by 8¢
$ 150028

CE Maguire, Inc.
Construction Engineering, Inc.
90 First Avenue
Waltham, Massachusetts 02154

Tel 617 890 0100
Telex 92 3403
Cable: CEM

M-1

TEC
Architects • Engineers • Planners

July 14, 1975
CEM #652.10
#652.386F

Boston Redevelopment Authority
One City Hall Square
Boston, Massachusetts 02201

Attention: Mr. Wallace B. Orpin

Reference: South End Project R-56
Site Preparation Contract "M-1"
Additional Review

Gentlemen:

Additional review of the specifications shows the references to watertight plugs enclosed herewith. (See Item 9-27, Watertight Plugs, letter dated July 10, 1975.)

A full review of the subject contract estimated quantities is proceeding as requested.

Very truly yours,

CE MAGUIRE, INC.

Arthur Landers

Arthur Landers, Project Manager
Environmental Engineering Division

AL/cw
Enclosures

c.c. w/encl. W. Barbato, B.R.A.

SUBCONTRACTORS' CERTIFICATION

Centerline Division Raymond International Inc certifies that:
(Subcontractor)

1. it intends to use the following listed construction trades in the work under the subcontract Laborers, Teamsters, Hoisting Eng'rs

2. (a) as to those trades set forth in the preceding paragraph one hereof for which it is eligible under Part I of these Bid Conditions for participation in the Boston Plan, it will comply with the Boston Plan on all construction work (both federal and non-federal) in the Boston Area Construction Program area subject to these Bid Conditions, those trades being _____ and/or

(b) as to those trades for which it is required by these Bid Conditions to comply with Part II of these Bid Conditions, it adopts the minimum minority manpower utilization goals and the specific affirmative action steps contained in said Part II for all construction work (both federal and non-federal) in the Boston Area Construction Program area subject to these Bid Conditions, those trades being: Laborers, Teamsters, Hoisting Eng'rs ; and

3. it will obtain from each of its subcontractors prior to the award of any subcontract under this subcontract the subcontractor certification required by these Bid Conditions.

[signature]
(Signature of authorized representative of subcontractor)

In order to ensure that the said subcontractors' certification becomes a part of all subcontracts under the prime contract, no subcontract shall be executed until an authorized representative of the (agency) had determined, in writing, that the said certification has been incorporated in such subcontract, regardless of tier. Any subcontract executed without such written approval shall be void.

Union ✓ Non-Union _____

Project Name and Number State Prequalification Contract M-11

Contract Amount: $ _____

Project Location South End, Boston, Mass

Name and Address of Prime Contractor Gate Division Browning Ferris Industries
100 Nallet St
Dorchester, MA 02124

ADDITIONAL STATEMENT OF BIDDER'S QUALIFICATIONS

(Site Preparation Contractor) Sub. — Raymond International Statement

The undersigned submits the following information relative to his qualifications and previous experience.

1. Number of years the bidder has been lining pipe by the proposed method:

   40 years

2. Available equipment, and men skilled in the operations required:*

   10 Complete Sets Lining Equip't
   10 Experienced Crews for Cleaning and Lining Op's

3. Manufacturer and type of machine to be used in lining the pipe:*

   Centriline Machine - Manufactured by Raymond International

4. Capacity of machine in feet per hour, for placing cement lining in pipe:

   300 lf per hour

5. Method of cleaning pipe: Hydraulic

6. Admixtures to be used in sand-cement mortar: None

7. List jobs completed which are comparable to the work to be done under this contract. Give name of awarding authority, date, and individual familiar with the details of the work.*

Date	Awarding Authority	Pipe Size	Thickness of Lining	Cleaned & Lined Linear Feet
1973	Phila PA c/o Mr Ken Z Homan Deputy Comm.	6-12"	3/16"	35000 lf
1974	Fall River MA c/o Mike Briscoe	6-24"	3/16	300000 lf
1974	Toronto, Ontario c/o Commissioner Brenner	6-8"	3/16	32000 lf
1974	New Haven, Conn 12d c/o NH Water Co	12"	3/16	10000 lf
1972	Rochester N Y	6-36"	1/4"	25000 lf

* Use additional sheets if necessary.

9.2 GENERAL (Continued)

h. Plugs

Open ends of abandoned water lines or existing lines which are to be cut and plugged as indicated on the Plans or as directed, shall be plugged with concrete or plugged with concrete and capped, or capped only, as directed by the Engineer.

i. Revisions During Construction

New services on mains to be cleaned and cement lined and on new mains to be installed are proposed primarily to replace existing lead and galvanized iron service lines. Copper services will not be replaced but will be reconnected to the new line.

It is the intent of this Contract that new service connections be provided only to buildings which will remain after urban renewal in the area. Generally, services to buildings, presently owned by the Boston Redevelopment Authority, vacated and scheduled for demolition, will not be reconnected to new water mains. Services to buildings scheduled for demolition and not vacated, will be reconnected but not replaced. To meet conditions found in the field, the service schedules shown on the Plans may be revised by the Authority during the construction period.

j. Maximum trench width for new water mains shall be the nominal diameter of the main plus three feet. Maximum trench width for water services shall be 3-feet.

9.3 MATERIALS, WORKMANSHIP AND CONSTRUCTION METHODS

a. Mains

1. Pipe for water mains and services 4 inches through 18 inches diameter, inclusive, shall be of ductile iron conforming to ANSI Specification A21.51, and shall be Class 2 ductile iron pipe. With written permission of the Water Division, an approved class of cast iron pipe, as listed below, may be substituted for the ductile iron pipe.

Pipe for 3-inch services and where, in the opinion of the Engineer better workmanship, as in replacing short sections of pipe, would result, cast iron pipe of the sizes and classes listed herein shall be used.

specifically permitted by the Engineer. If blocking is permitted at a particular location, extreme care must be taken to place and compact the bedding beneath the pipe to develop the bearing which would be provided under the specified methods for preparation for trench laying of pipe.

7. All fittings shall be anchored to prevent any movement of the fittings or the adjacent pipe. In general this anchorage shall be provided by the installation of portland cement concrete thrust blocks, or clamps, and tie rods as shown on the City of Boston Standard Detail Sheets, and where and as directed by the Engineer. The nature of the work is such that extensive hand excavation may be required to excavate for the concrete thrust blocks. The shape and size of concrete thrust blocks shall be determined by the Standards and Detail Sheets of the City of Boston, Public Works Department, Water Division. The Engineer may require concrete to be placed at points on the pipe line other than at fittings. All concrete used for thrust blocks shall be exposed for at least sixteen hours before backfilling is begun over them. (See Section 10.0 - CEMENT CONCRETE MASONRY.)

8. At all times when pipe laying is not in progress or the trench is unattended, the open ends of pipe shall be closed by watertight plug or other approved means.

9. When cutting of pipe is required, the cutting shall be done by machine in a neat and workmanlike manner without damage to the pipe or cement lining and so as to leave a smooth end at right angles to the axis of the pipe. Cut ends of pipe to be used with a push-on type rubber joint shall be beveled to conform to the manufactured spigot end, that is, tapered about 1/8-inch back at an angle of approximately 30 degrees, and be filed or ground smoothly.

10. The method of jointing pipe shall be in full accordance with the instructions of the manufacturer. In general, the push-on type joint is assembled using a rubber gasket which is inserted in a groove in the bell end of the pipe; and after lubrication of jointing surface, the plain end of the pipe to be entered is placed in alignment with the bell of the pipe to which it is joined and pushed home with a jack or other means. Two serrated silicon bronze wedges are to be inserted in the bell 180 degrees apart. These wedges are driven in after the joint has been put together. Prior to assembling

Gate Valves

Boston Mass DPW Chapter 90 River St
B.O. 5/28/75

Item # 350.06 6" Gate Valve and Box

	Bids Received
DPW Office Estimate	400.00 ea
Bidders - Scardina	350.00
Reynolds Bros	350.00
Walter Reed Co	467.50
Mario Susi & Son	300.00
William Capone Corp	400.00
John J Botti Co	450.00
Hanover Contr Co	400.00
M+C - BFI	225.00
Northeastern Construction	300.00
John J Pomeroy	400.00
Methuen Constr Co	80.00
Carle Construction Co	275.00

Peabody Mass DPW Howell St
Bid 6/18/75

Item 350.08 8" Gate Valve and Box

DPW office Estimate	350.00
Bidders Trimount Bitor Concrete	351.50
Hanover Contr Co	400.00
Methuen Constr Co	600.00
Canti and Donahue Inc	425.00
G Rotondi	375.00
M+C BFI	470.00

Lynnfield, Mass. Reservoir - Lynnfield Center Water District

Bid February 5, 1975

Item #54 - 8" Gate Valves and Boxes

Bidders -	
Gevered Keone	472.00
ET&L Construction	550.00
Berlotts Co	500.00
Suburba Excavators	400.00
M+C BFI	375.00
Modern Continental	500.00
D Federico Co	300.00
Wales Corp	370.00
Marois Bros	325.00
JFWhite	500.00
DeMatteo	530.00
Wes Contr	400.00

Construction of Winter Street Grade Separation - Malden - Melrose

Bid to MBTA 3/4/75

Item 6" Gate Valve and Box - Item #1520.106

Perini	350.00
Salah and Pecci	250.00
Sutton Corp	360.00

Item 8" Gate Valve and Box Item #1520.108

Perini	500.00
Salah and Pecci	400.00
Sutton Corp	360.00

Canvas of Bids – Temporary Hydrants

Bids to	Date	Spinello	Amcron	Centerline
City of Boston	7/24/74	200.00	50.00	100.00
Revere	12/12/74	50.00	100.00	100.00
Boston	6/27/74	300.00	50.00	No Bid
Boston	11/15/73	300.00	50.00	200.00
Fall River	6/6/74	200.00	100.00	125.00

ESTIMATOR'S SHEET

Eng'r FO Date 12-1 Labor A-7 SHEET NO.

Period Aug 1 - May 31

	Labor	Material	Equip't	Sub-Total
Rental Unit 10 months @ 245.00 incl Air Conditioning		2450.-		
Transportation				50.00
Set-up	180.00	150.00		
Rental Card 10 months @ 150.00		1500.00		
Fencing 185 lf Fence @ 10¢ 1942.50 15 lf Gate 300.- 6 ea Cord Posts 300.-				2542.50
Paving 50×50 = 2500 - 300 = 2200/4 = 250 sq 2V4 sq 250 sq @ 5.50 incl Gravel & fine Crush				1375.00
Sewer Installation 50' ±	180.-	200.-	360.00	Permit & A 200.00
Water Installation 50' ±	180.00	220.00	360.00	100.00
Electric Installation -				
Cost - 10 mos @ 50.-		500.-		
Htg Const - Gas 6 mos @ 75.00		450.00		
Telephone 10 mos @ 40.-		400.-		
Bath at Spring 10 mos @ 20		200.-		
Janitor Service 10 mos @ 40.-				400.00
Insurance - Eng'rs				75.00
- Fire & Theft				250.00
Equip't - 2 - Chairs 90.00 - Addg M 150.- Stool 40.00 - Calculator 250.-		1175.-		
File Cabinet (Fireproof) 375.00 -				
Plan Racks 2 @ 135.00 - 270.00				
Cleanup after Job	120.-		360	
660 + 32%				
	871.20	7245.00	1080.00	4992.00

Cost → 14188.20

Item: Engrs Field Office

MBTA Job 3/4/75 Winter St Grade Separation
Malden ~~Wood~~ Melrose

Perini	15000 oz
Schlumberger	12000 oz
Sutton	18000 oz

CE Maguire, Inc.
Combustion Engineering, Inc.
60 First Avenue
Waltham, Massachusetts 02154

Tel. 617/890-0100
Telex: 92-3403
Cable: CEMI

TEC
Architects • Engineers • Planners

July 29, 1975

CEM #652.386F

Boston Redevelopment Authority
One City Hall Square
Boston, Massachusetts 02201

Attention: Mr. Wallace B. Orpin, P.E., Director of Engineering

Reference: South End Project R-56
Site Preparation Contract "M-1"
Review of M & C Estimateof Four Quantities

Gentlemen:

We have reviewed the estimates made by M & C Division of Browning-Ferris Industries, Inc. (letter dated July 21, 1975).

There are two primary problems in comparing their estimate of quantities for Items 6-1, 7-1, and 11-1, Rock Excavation, Gravel Borrow, and Temporary Bituminous Paving, respectively, with ours.

First is the problem of preparing an engineering estimate based on absolute minimum quantities to be expected. M & C has used an average trench width of 2.67 feet for all pipe. The Water Division minimum allowable trench for mains (Standard Sheet No. 10) is 2.5 feet. Thus, the "average" M & C trench is only 2 inches greater than absolute minimum. In our estimate, we have assumed a trench width for services of 3 feet, and for mains, a trench which provides for an 18-inch working space on each side of the nominal diameter of the pipe; thus, for 8-inch mains the trench width was estimated at 3.67 feet and for 12-inch mains, at 4 feet. We feel that this permits adequate working space, and, even if a contractor generally excavates a lesser trench, there should be some provision for the need in some areas for additional excavation due to immediately adjacent and crossing utilities which are abundant in the South End streets. As you are well aware,

there have been abundant complaints from contractors regarding establishing too narrow pay limits which, if followed in the field, too severely restrict their methods of operation; it has been claimed that such pay limits are deceptive, that even though these are specified and/or shown by details on the Plans, a contractor should be provided with adequate paid space to perform his operations. Further soils analysis has verified our assumptions with regard to soil quality in the contract areas. Most of the soil is fill material. While there is good gravel in some locations, most of the fill contains considerable silt and cinders, and frequently brickbats and cobbles. Also, in certain locations, the pipe will be close to the level of peat materials and some overexcavation and replacement with gravel will be required. (See attached memorandum.)

A second problem in comparing our estimate of quantities with that of M & C, whether those of Exhibit A or Exhibit B, is that not only do the bid prices of a contractor reflect his methods, but his methods may also reflect his ~~matter~~ manner of bidding. A contractor who has bid low for gravel refill, rock excavation, and pavement replacement will of course conduct his operations so as to minimize these quantities in some cases even at the expense of convenience; also, a contractor who has a higher bid for these items will not be as careful and these quantities could run higher.

Another aspect of the difficulty in comparing quantities is that, one intent of the contract is to minimize disruptive excavations and speed contract work and consequently minimize community inconvenience. Thus, for example, "pulling through" of services wherever practicable is encouraged by including trench excavation in the cost of service installation. However, an Engineer's quantity estimate cannot be based on this "hoped-for" outcome and the larger estimated quantities for rock excavation, gravel refill, and pavement replacement permit - and even encourage - a lower bid for these items, thus in turn minimizing them. Thus, based on the manner of bidding, it is entirely possible that quantities may run to the minimums suggested by M & C. On the other hand, based on higher bids for the same items, these could run to the levels estimated. In any case, we feel that these estimated quantities of the Proposal are not unreasonably high.

The difference in the quantity of fittings, Item 9-6, is primarily in the couplings required to install new valves to existing lead-jointed pipes. This additional weight is approximately

14,000 pounds (two couplings each at twenty-six 8-inch valves, sixty-eight 12-inch valves). When this is added to the 52,410 pounds estimated by M & C the balance of 6,600± pounds represents what we feel is a normal "cushion" against additional work required primarily by profile problems in the relaying of mains; detailed records of the very old existing main installations, requested of the Water Division for review, were incomplete.

In view of the disdain with which quantity overruns are viewed, it is felt that the only item which might be reduced on any readvertising is rock excavation, based upon the present method of operations in Contract "L-1", and also based on the estimated dimensions of the proposed excavations by M & C as the only other bidder on the subject contract. A more detailed analysis of this item - based on a maximum number of actual field measurements - is nearly completed.

Very truly yours,

CE MAGUIRE, INC.

Arthur Landers, Project Manager
Environmental Engineering Division

AL/cw

Enclosure

TEC

To: Art Landers

From: Asaf A. Qazilbash

CEM No. 652.651

Re: BRA Contract M-1, Water Supply Lines, Gravel Quantities

July 29, 1975

We have reviewed the problem described in your memo regarding subject project dated July 28, 1975. There are logs of test borings available along the proposed routes of the water line. These borings were taken mostly for other construction over many years in the past. A review of these borings has indicated that almost all of the trenches will be located in the fill material overlying clay deposits. In some areas there are layers of organic silt and peat sandwiched between the fill and the clay deposits.

The fill generally consists of a mixture of sand, silt, gravel, brickbats, cobbles, etc. At some locations there are cinders mixed with this fill, thus rendering it corrosive to the proposed lines.

In some instances the borings indicate the organic deposits to be within a foot of the proposed 6-foot depth of the trench. In these areas it is likely that some organic silt may be encountered at the pipe inverts. If that should happen, it is recommended that at least a 1-foot gravel bedding be provided under the pipe to separate the organic material from the pipes and thus reduce the corrosion hazard.

Fill containing appreciable quantities of cinders are also corrosive and should not be used as backfill around the pipes for the same reason. The presence of boulders and bricks require the removal of these large sized materials from the backfill around the pipe.

As shown on the attached sketch some portions of the trench must be backfilled with selected suitable gravel. All material around the pipe should consist of selected gravel (this comprises about 4 cubic feet of gravel per linear foot). Further, all material under the street pavement up to a depth of 18 inches must consist of suitable gravel to prevent frost heave problems and give the layered pavement adequate strength to bear the traffic loads (this comprises a volume of 4 cubic feet per linear foot of the trench). Thus, it can be seen that the only place where on-site suitable fill may be used comprises a volume of approximately 9 cubic feet (or approximately 50% of the total fill volume).

Based on our experience in the South End area we estimate that only 50% of the

excavated material could be used as backfill in the trench (this could vary between 30% and 70% depending on the actual material encountered in the excavations).

With a minimum trench width of 2'-6" an estimated 11,000 cubic yards of excavation would be required. By providing an allowance for the thickness of sheeting, approximately 12,000 cubic yards would be required. If an open excavation with side slopes of 1 horizontal to 1 vertical were used, 33,000 cubic yards of excavation would be necessary.

If 50% of the excavated material could be reused in the sheeted trenches, about 6,000 cubic yards of bank gravel would be required. Presuming that open excavation will not be permitted and only about 30% of the excavated material could be reused, a reasonable figure for the required gravel would be around 8,000 cubic yards. Our specified restrictions for stockpiling excavated materials may require that the contractor haul away all excavated material from the site and then bring back offsite gravel material to refill the trenches. In this case the entire 12,000 cubic yard could consist of gravel refill.

I am also enclosing a memo from Jim Stangenberg to the files dated July 29, 1975.

AAQ:mt

encs.

cc: S. Stevens
J. Stangenberg

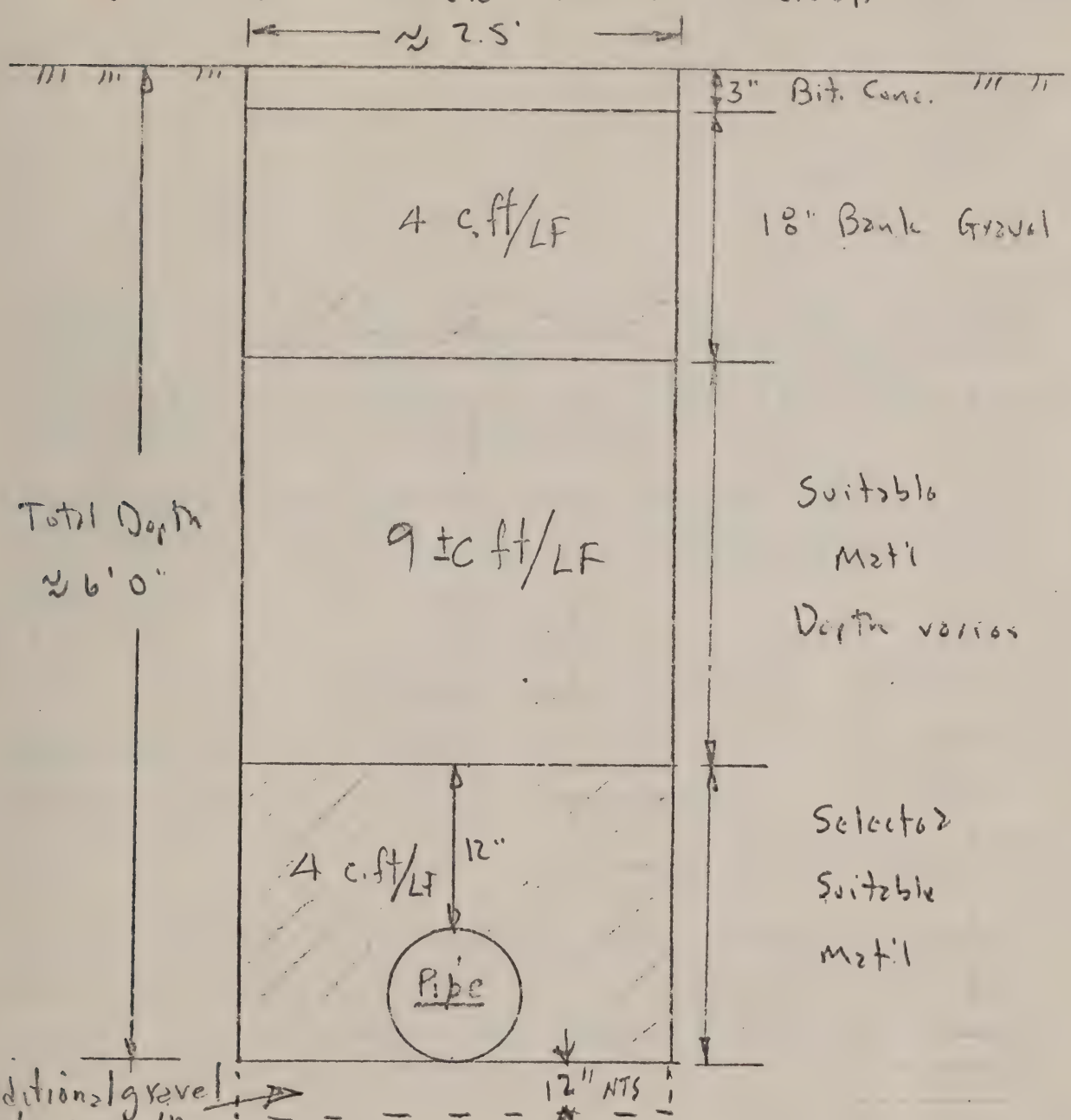
PROJECT BRA Contract M-1 ACC. NO. 652.651

SUBJECT Gravel Refill Quantity Estimate SHEET NO. ___ OF ___

DATE 7.29.19 73

COMP. SFS CHECK AAQ CONT. NO. ___

TYPICAL WATER MAIN TRENCH



Total Vol of Excavation ≈ 18 cf / lin. ft.

Vol of Pipe ≈ 0.4

Req'd Refill ≈ 17.6 cf / lin ft

Bit Conc. ≈ 0.6 cf / lf Selected Suitable ≈ 4 cf/lf

Bank Gravel ≈ 4 cf / lf ∴ Suitable Refill ≈ 17.6 - 8.6

≈ 9 cf/lf

TEC

To: Files

From: J. K. Stangenberg

CEM No. 652.651

Re: Refill
BRA Contract M-1

July 29, 1975

With regard to the bank gravel item for the above contract, the 12,000 cubic yards of gravel borrow would appear high for the job. Using a minimum trench width of 2'-6" would give 11,000 cubic yards excavation without allowance for sheeting. With allowance for sheeting, about 12,000 c.y. would be required. No sheeting or open excavation would require say 1:1 side slopes and 33,500 c.y. excavation.

The amount of Bank Gravel required is a judgment factor, approximately 50% may be estimated which would yield either 5,500, 6,000 or 16,750 c.y. of bank gravel required. Bank gravel may run as high as 2/3 or as low as 1/3 on the whole job. See tabulation below.

Bank Gravel

	Minimum	Maximum	Average
Without Sheeting	3,800	7,800	5,500
With Sheeting	4,000	8,000	6,000
Open	11,000	22,000	16,750

Presuming the Contract would not be allowed the option of open excavation and presuming maximum bank gravel is required 8,000 c.y. would be a reasonable figure.

However, this contract is unit price and the client may wish to protect himself against overrun and may rather go the full amount for replacement.

JKS:mt

cc: S. Stevens
A. Qazilbash

CE Maguire, Inc.
Combustion Engineering, Inc.
60 First Avenue
Waltham, Massachusetts 02154

Tel. 617/890-0100
Telex: 92-3403
Cable: CEMI

TEC
Architects • Engineers • Planners

July 15, 1975
CEM No. 652.386F

Boston Redevelopment Authority
One City Hall
Boston, Massachusetts 02201

Attention: Mr. William Barbato, Project Engineer

Re: South End Project R-56
Site Preparation Contract "M-1"
Neat Quantity Estimate

Gentlemen:

Submitted herewith is a Xerox copy of Site Preparation "M-1" Engineer's Estimate which includes the bid prices. Shown in red in the quantity column is the latest neat quantity estimate.

The original estimated quantities are the result of rounding up to neat quantity estimates. Quantities which may warrant an explanation are:

Item 6-1 (Rock Excavation)	This item is somewhat higher than the neat estimate because an cccurate determination of this item is unfeasible due to varying pavement and base conditions. This item was increased to avoid possible overrun areas of a potentially high priced item.
Item 7-1 (Bank Gravel)	The quantity estimate in the proposal is lower than the neat quantity. The proposal estimate is 80% of the neat quantity because it was felt that this was a more realistic figure than using 100% bank gravel refill.
Item 9-1 (3" or 4" D.I.C.L. pipe)	The high quantity estimate in the proposal compared to the neat estimate is to cover the replacement of unanticipated services in Tremont Street or Columbus Avenue.

July 15, 1975
CEM No. 652.386F

Item 9-7 (3" or 4" Gate)	This item is high also to cover the replacement of unanticipated services.
Item 9-12 (3/4" services)	The neat quantity estimate is somewhat higher than the proposal estimate due to the adding in of services listed by the City of Boston Water Division as "no record". There generally is no service connection at these locations, but they were included in the neat estimate to illustrate the possibility they may be there.
Items 9-14 and 9-15 (1-1/2" and 2" service)	The proposal quantity is somewhat higher than the neat estimate to cover the replacement of unanticipated services. It should be noted that some of the connections in Columbus Avenue and Tremont Street could be as long as 50 feet.

Very truly yours,

CE MAGUIRE, INC.

Arthur Landers

Arthur Landers, Project Manager
Environmental Engineering Division

RG/AL/rk

enclosures

Low Spinello Est. Item 6-5 is wrong

Copy for A. Landers — ENGINEER'S ESTIMATE — REVISED BY ADDENDUM NO. 1

June 25, 1975

2nd M&C Div. Browning Ferris Industries, Inc. * + Partial Item # 6-5 is wrong

The Contractor hereby offers to provide all necessary machinery, tools and apparatus and to do all the work and furnish all the materials called for by the Contract Documents of Site Preparation Contract "M-1" in the manner and time prescribed and according to the requirements of the Authority, including all the incidental work, and to complete the work within one hundred eighty calendar days. (See Specifications, Section 403.0).

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
6-1	3,800 3,020	Cubic yards of Rock Excavation including disposal, at M&C Div. of B&F 35 Spinello .01 Per Cubic Yard	35	00	133,000	00
6-2 ✓	300	Cubic yards of Test Pits and Miscellaneous Excavation and refilling, at 15 10 Per Cubic Yard	15	00	4,500	00
6-3 ✓	100	Cubic yards of Earth Excavation Below Grade, at 25 20 Per Cubic Yard	18	00	1,800	00
6-4 ✓	1 TOKEN	Remove Existing Water Line Main Valve 6-Inches or Greater on Water Lines to be Abandoned, at Seven Hundred Dollars and No Cents Each	700	00	700	00
6-5 ✓	10 TOKEN	Remove Existing Service Gate or Meter in Street Boxes, on services to be abandoned, at One Hundred Fifty Dollars and No Cents Each	150	00	1,500	00
6-6	~~1~~ 2 TOKEN	Remove Existing Blow-Off and Plug Tee at Main, at Six Hundred Dollars and No Cents Each	600	00	600	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
7-1	~~12,000~~ 14160	Cubic Yards of Bank Gravel refill, as authorized by the Engineer, and for all trench refill except as otherwise directed by the Engineer, at				
				4 25		
				1.01		
		Per Cubic Yard	5	00	,000	00
7-2	~~500~~ 405	Cubic Yards of Grading Size No. 67 Crushed Stone, (3/4-inch to No. 4) furnished and placed by the authority of the Engineer, at				
				8 50		
				8 00		
		Per Cubic Yard	12	00	,000	00
8-1	~~300~~ 180	Linear feet of furnished and laying 2-Inch Temporary Bypass Pipe for Domestic Service, including temporary services, maintenance, fittings, valves, removal and all incidental work, at				
				3 50		
				4 00		
		Per Linear Foot	3	00	900	00
8-2	~~24,000~~ 24015	Linear feet of furnishing and laying 4-Inch Temporary Bypass Pipe for Domestic Service, including temporary services, maintenance, fittings, valves, removal and all incidental work, at				
				5 50		
				6 00		
		Per Linear Foot	5	00	,000	00
8-3	~~21,~~000 21,025	Linear feet of furnishing and laying 4-Inch Temporary Bypass Pipe for Fire Protection, including temporary services, maintenance, fittings, valves, removal and all incidental work, at				
				5 50		
				5 00		
		Per Linear Foot	4	00	1,000	00
8-4	~~450~~ 465	Linear feet of furnishing and laying 6-Inch Temporary Bypass Pipe for Fire or Domestic Service, including temporary services, maintenance, fittings, valves, removal and all incidental work, at				
				8 00		
				9 00		
		Per Linear Foot	7	00	,150	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
8-5	~~93~~ 95	Furnish and install Temporary Fire Hydrants, complete, including tee branch, temporary service pipe, valves, fittings, maintenance, removal and all incidental work, at				
		Each	125 350 250	00	23,250	00
8-6 ✓	1	Furnish and set 12-inch x 4-inch or 12-inch x 6-inch Tapping Sleeve and Valve, complete, including excavation, temporary bypass line and all connections, removal, refilling, and all incidental work, at One Thousand Five Hundred Dollars and No Cents	~~1500~~			
	TOKEN	Each	1,500	00	1,500	00
8-7	~~3,700~~ 3635	Cleaning and Cement Lining 8-Inch Cast Iron Water Pipe, complete, including excavation, refilling and all incidental work, at				
		Per Linear Foot	15 00 14 12	00	44,400	00
8-8	~~10,500~~ 10380	Cleaning and Cement Lining 12-Inch Cast Iron Water Pipe, complete, including excavation, refilling and all incidental work, at				
		Per Linear Foot	16 20 18 14	00	147,000	00
8-9	~~400~~ 390	Cleaning and Cement Lining 20-Inch Cast Iron Water Pipe, complete, including excavation, refilling and all incidental work, at				
		Per Linear Foot	22 00 22 18	00	7,200	00
8-10 ✓	15	Obstruction in Pipes To Be Cleaned and Cement Lined, complete, including excavation, removal and connections, refilling, and all incidental work, at One thousand Dollars and No Cents	~~1000~~			
	TOKEN	Each	1,000	00	15,000	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
8-11	5	Plugged Service, complete, including excavations, removal and connections, refilling and all incidental work, at ~~250~~ Two Hundred Fifty Dollars and No Cents				
	TOKEN	Each	250	00	1,250	00
8-12	10	Tap Hole in Existing Service, complete, including excavation, tap connections, refilling and all incidental work, at ~~300~~ Three Hundred Dollars and No Cents				
	TOKEN	Each	300	00	3,000	00
8-13	1	Unscheduled Remobilization and Demobilization for additional work or work ordered out of sequence, at ~~1500~~ One Thousand Five Hundred Dollars and No Cent				
	TOKEN	Each	1,500	00	1,500	00
9-1	~~400~~ 305	Linear feet of trench and furnishing laying or furnishing and relaying of existing water pipe with 3-Inch or 4-Inch C.I. or D.I.C.L. Water Pipe, including all connections, refilling and all incidental work, at 27 50 40				H
		Per Linear Foot	18	00	7,200	00
9-2	~~400~~ 410	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 6-Inch D.I.C.L. Water Pipe, including all connections, refilling and all incidental work, at 30 50				H
		Per Linear Foot	20	00	8,000	00
9-3	~~4,700~~ 4600	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 8-Inch D.I.C.L. Water Pipe, including all connections, refilling and all incidental work, at 42 50 70				H
		Per Linear Foot	30	00	141,000	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
9-4	~~1,000~~ 830	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 12-inch D.I.C.L. Water Pipe, including all connections, refilling and all incidental work, at				
		Per Linear Foot	50 80 40	00	40,000	00
9-5	10	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 20-Inch D.I.C.L. Water Pipe, including all connections, refilling and all incidental work, at Forty Dollars and No Cents				
	TOKEN	Per Linear Foot	~~60~~ 40	00	~~600~~ 400	00
9-6	~~73,000~~ 75,500	Pounds of Additional Fittings, furnished and set, including all incidental work, at				
		Per Pound	120 101 1	00	73,000	00
9-7	~~15~~ 8	Furnish and set 3-Inch or 4-Inch Gate, complete in place, including box, excavation, removal of existing gate or pipe section, refilling and all incidental work, at				
		Each	300 500 600	00	9,000	00
9-8	~~40~~ 36	Furnish and set 6-Inch Gate, complete in place, including box, excavation, removal of existing valve or pipe section, refilling and all incidental work, at				
		Each	600 1000 700	00	28,000	00
9-9	~~50~~ 45	Furnish and set 8-Inch Gate, complete in place, including box, excavation, removal of existing valve or pipe section, refilling and all incidental work, at				
		Each	800 1300 1,000	00	50,000	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
9-10	~~75~~ 71	Furnish and set 12-Inch Gate, complete in place, including box, excavation, removal of existing valve or pipe section, refilling and all incidental work, at 1000 1600 Each	1,200	00	90,000	00
9-11		Not Applicable Each				
9-12	~~8,000~~ 9332	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 3/4-Inch Copper Service Pipe, including all connections, refilling and all incidental work, at 16 50 21 Per Linear Foot	12	00	96,000	00
9-13	~~600~~ 679	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 1-Inch Copper Service Pipe, including all connections, refilling and all incidental work, at 17 00 25 Per Linear Foot	14	00	8,400	00
9-14	~~500~~ 249	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 1-1/2-Inch Copper Service Pipe, including all connections, refilling and all incidental work, at 17 75 27 Per Linear Foot	18	00	9,000	00
9-15	~~200~~ 69	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 2-Inch Copper Service Pipe, including all connections, refilling and all incidental work, at 18 75 30 Per Linear Foot	20	00	4,000	0

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
9-16	~~300~~ 309	Furnish and set 3/4-Inch Corporation Stop, complete in place, including all drilling and tapping of the main, and all incidental work, at Each	65 70 65	00	19,500	00
9-17	~~11~~ 18	Furnish and set 1-Inch Corporation Stop, complete in place, including all drilling and tapping of the main, and all incidental work, at Each	70 75 80	00	880	00
9-18	~~20~~ 6	Furnish and set 1-1/2-Inch Corporation Stop, complete in place, including all drilling and tapping of the main, box, frame and cover, all all incidental work, at Each	155 100 100	00	2,000	00
9-19	~~11~~ 4	Furnish and set 1-1/2-Inch Corporation Stop with 1-1/2" x 2" Adapter, complete in place, including all drilling and tapping of the main, box, frame and cover, and all incidental work, at Each	200 200 170	00	1,870	00
9-20	~~300~~ 309	Furnish and set 3/4-Inch Curb Stop, complete in place, including all connections to services and all incidental work, at Each	75 120 110	00	33,000	00
9-21	~~11~~ 18	Furnish and set 1-Inch Curb Stop, complete in place, including all connections to services and all incidental work, at Each	80 150 130	00	1,430	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
9-22 ✓	1	Install New Water Meter, including all connections, additional hardware and all incidental work, at Fifty Dollars and No Cents				
	TOKEN	Each	50	00	50	00
9-23	~~25~~ 24	Hydrant, furnished and set, complete in place, including all necessary connections, removal of existing hydrant, if any, tie rods, refilling and all incidental work, at	800 / 1000			
		Each	750	00	18,750	00
9-24 ✓	1	Hydrant Removed, and not replaced, including all necessary excavation, refilling and all incidental work, at Six Hundred Dollars and No Cents				
	TOKEN	Each	600	00	600	00
9-25 ✓	4	Adjust Valve or Corporation Stop Box to Grade including cleaning and excavation and backfill, at One Hundred Dollars and No Cents				
	TOKEN	Each	100	00	400	00
9-26 ✓	4	Clean Valve or Corporation Stop Box, at Fifty Dollars and No Cents				
	TOKEN		50	00	200	00
9-27 ✓	2	Furnish and install Watertight Plug, complete in place, including excavation and backbill, at	160 / 600			
		Each	250	00	500	00

H

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
10-1 ✓	100	Cubic yards of Cement Concrete Masonry for pipe restraint, encasement, or for any other purpose as directed, including reinforcing steel and all incidental work, at				
		Per Cubic Yard	40	00	4,000	00
11-1	~~11,000~~ 10,550	Square yards of 3-inch Temporary Bituminous Pavement, at	7	50 ,01	77,000	00
		Per Square Yard				
11-2 ✓	150	Tons of 3-Inch Cold Patch Paving, at				
		Per Ton	30	00	4,500	00
11-3 ✓	5	Remove and Reset Existing Brick Sidewalk or Gutter, complete in place, at				
	TOKEN	Sixty Dollars and No Cents Per Square Yard	60	00	300	00
11-4 ✓	5	Remove and Replace Mortared Brick Sidewalk or Gutter, at				
	TOKEN	Twenty Dollars and No Cents Per Cubic Foot	20	00	100	00
12-1 ✓	1	Engineer's Field Office, complete, including equipment, utilities and services, maintenance and fencing, at				
		Lump Sum	5,000		5,000	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
13-1 ✓	2,300	Hours of Special Duty Police supplied by the Contractor, at Nine Dollars Per Hour	9	00	20,700	00
13-2 ✓	100	Hours of Special Duty Police Sergeant supplied by the Contractor, at Eight Dollars and Twenty-Five Cents Per Hour	8	25	825	00
		TOTAL - SITE PREPARATION CONTRACT "M-1"			~~1,591,145 00~~ 1,584,898 00 1,416,055	00

1,59[illegible]

2 m

Low

NOTE 1. In accordance with common practice, where a quantity is labelled "Token", use of the item is either not anticipated or no estimate of quantity can be made, but the item is included to establish a price under this Contract, usually in the event such work is required owing to unforeseen field conditions.

NOTE 2. Payment under those items for which quantities are shown in the above Proposal shall constitute full payment for all of the work required under this Contract as indicated on the Drawings and delineated in the Specifications.

NOTE 3. In case of a discrepancy between the unit prices written in words and unit prices written in figures, the written words shall govern.

NOTE 4. If water services are replaced by "pulling through" new copper services, the quantities of Rock Excavation, Bank Gravel and 3" Temporary Paving will be less than those shown on this Bid Proposal.

September 15, 1975

ADDENDUM NO. 1
to
SPECIFICATIONS AND DRAWINGS
for
SITE PREPARATION CONTRACT "M-1"
SECOND ADVERTISING
of the
SOUTH END PROJECT NO. MASS. R-56
CITY OF BOSTON, MASSACHUSETTS

NOTICE TO ALL BIDDERS

The attention of all bidders submitting proposals, etc., for Site Preparation Contract "M-1" of the South End Project No. Mass. R-56, is called to the following addenda to the printed Specifications and Drawings. The items set forth herein, whether of omission, addition or substitution are to be included in, and form part of, the Specifications and Drawings for the above named project.

Bidders are informed that this Addendum No. 1 consists of eleven (11) pages, plus five (5) attachments as follows: Attachment No. 1 - Typical Trench Details consisting of 2 pages; Attachment No. 2 - PROPOSAL - BIDDER'S FORM, pages 8-a through 8-j, three sets of each; Attachment No. 3 - Boring Logs consisting of 33 pages; Attachment No. 4 - two additional pages to the Specifications - pages 143 and 144; Attachment No. 5 - Sheet 1 of 19, Revised General Plan .

REVISIONS TO THE SPECIFICATIONS

Pages 8-a through 8-j — PROPOSAL - BIDDER'S FORM. The three copies of the Proposal in the Specifications to be DELETED in their entirety and the three copies of the Proposal attached hereto to be SUBSTITUTED.

Page 70 — SECTION 6.1 SCOPE, Paragraph b. DELETE Paragraph b. in its entirety and SUBSTITUTE the following:

"b. Excavation of all roadway and walkway pavements and bases, including variable depth roadway bases of macadam, cement concrete, and/or granite block embedded in concrete, all earth

Page 70
(Continued)

debris, abandoned street car tracks, curbings, wood, and all materials not otherwise classified herein, will not be paid for separately, but are to be considered included in the work of the applicable Contract Payment items."

SECTION 6.1 SCOPE, Paragraph c. DELETE Paragraph c. in its entirety and SUBSTITUTE the following:

"c. Rock Excavation, Item 6-1, includes bedrock, rock fragments, boulders and masonry rubble that exceed one-half cubic yard in volume that are encountered within the required limits of excavation. This item also includes the rock excavation, herein defined, within the limits of Test Pits and Miscellaneous Excavation."

Page 71

SECTION 6.1 SCOPE, Title of Paragraph g. DELETE title of Paragraph g. in its entirety and SUBSTITUTE the following:

"g. Remove Existing Water Line Main Valve - 6 Inches or Greater on Water Lines to be Abandoned, Item 6-5, or Remove Existing Service Gate or Meter in Street Boxes on Services to be Abandoned, Item 6-6."

Page 72

SECTION 6.1 SCOPE, Paragraph g., second subparagraph. DELETE this paragraph in its entirety and SUBSTITUTE the following:

"Separate payment shall be made under Item 7-1 for bank gravel used as refill. Three-inch temporary resurfacing shall be included in the unit price bid for each of the items of this Section 6 requiring such resurfacing. Excavation shall not exceed that required for removal and plugging. Resurfacing shall sextend to one foot beyond the outer edges of the boxes. Separate payment for thrust blocks where required will be made under Item 10-1. All such work required to replace an existing valve with a new valve as required by the Plans or as directed and all such work on appurtenances and boxes within the trench for new or relay mains or services or within excavations otherwise required by the Contract work will not be paid for separately under Items 6-4, 6-5, and 6-6."

Page 73

SECTION 6.1 SCOPE, Paragraph i., first two sentences. DELETE the first two sentences in paragraph i. and SUBSTITUTE the following:

" i. Should the Contractor be directed by the Engineer to excavate beyond the Limits of Work shown on the Plans or defined in the Specifications, outside the trenching required for installation of new pipe, fittings, or appurtenances, for removal of existing pipe or appurtenances such excavation shall be paid for as Test Pits and Miscellaneous Excavation, Item 6-2, except where such work is included for payment under other items of the Proposal. This work shall include removal and disposal of the pipe and/or appurtenances, refill, (except the bank gravel and crushed stone which may be required and which shall be paid as specified below) all as directed by the Engineer."

Paragraph k. DELETE paragraph k. in its entirety and SUBSTITUTE the following:

"k. Bank Gravel and Crushed Stone where required and authorized by the Engineer shall be paid for under Payment Items 7-1 and 7-2, respectively (see Section 7.0) except in service pipe trenches. (See Section 9.4e)"

Page 74

SECTION 6.1 SCOPE, Paragraph m. DELETE paragraph m. in its entirety and SUBSTITUTE the following:

"m. No separate payment will be made for 3-inch bituminous pavement. (See Section 11.0.) "

SECTION 6.2 WORKMANSHIP, Paragraph a., line 3. DELETE line 3 in its entirety and SUBSTITUTE the following:

"venient and safe working conditions and so as to interfere with traffic as little as"

Paragraph d. DELETE paragraph d. in its entirety and SUBSTITUTE the following:

"d. No blasting will be permitted under this Contract."

Page 74 (continued)

SECTION 6.2 WORKMANSHIP, Paragraph g., second Subparagraph.
DELETE last sentence of second Subparagraph and SUBSTITUTE the following:

"No additional payment will be made for the removal of steel rails or wood ties or their foundations in this Contract. "

Page 79

SECTION 6.4 MEASUREMENT AND PAYMENT, Paragraph e.
DELETE the first line of paragraph e. and SUBSTITUTE the following:

"e. Payment for excavation under Items 6-1, 6-2, and 6-3 will be"

Page 80

SECTION 6.4 MEASUREMENT AND PAYMENT, Paragraph e.
Remaining portion of paragraph e.,which is at top of page 80, to be DELETED and the following SUBSTITUTED:

"and as ordered. All required sheeting, shoring and bracing, and dewatering shall be considered as included for payment in the respective unit prices listed in the Proposal. Payment under Item 6-2 shall include removal of pavements and pavement bases, backfilling, all grading and rolling to prepare subgrade, disposal of excavated material, and all work incidental thereto. Payment for Excavation Below Grade, Item 6-3, shall be full compensation for excavation, disposal of material and all else incidental thereto. Bank Gravel, Crushed Stone, and Rock Excavation (as specified), within the payment limits, as required and as directed will be paid for as specified elsewhere."

Paragraph f. DELETE Paragraph f. in its entirety and SUBSTITUTE the following:

"f. Payment for: Remove Existing Water Line Main Valve 6 Inches or Greater on Water Lines to Remain in Service, Item 6-4, Remove Existing Water Line Main Valve 6 Inches or Greater on Water Lines to be Abandoned, Item 6-5, Remove Existing Service Gate or Meter, in Street Boxes, Item 6-6, and Remove Existing Blow-Off and Plug Tee at Main, Item 6-7,

Page 80
(continued)

will be made at the Contract unit price, each under the respective item. Such price and payment shall constitute full compensation for all labor, tools, equipment, plant and materials necessary for removal of each service gate or blow-off, including excavation and stockpiling of, or satisfactory disposal of all excavated material, all sheeting, shoring, bracing and dewatering, and 3-inch bituminous resurfacing. Rock excavation, (as specified), bank gravel and crushed stone within the payment limits as required and as directed will be paid for as specified elsewhere."

Paragraph h. DELETE paragraph h. in its entirety and SUBSTITUTE the following:

"h. No separate payment shall be made for excavation of roadway and walkway pavements and bases of bituminous, asphalt, concrete, granite block, macadam, etc. The Contractor's attention is directed to General Note No. 43 on the Drawings."

Paragraph j. is to be ADDED as follows:

"j. No separate payment shall be made for 3-inch bituminous pavement to patch excavation openings but the cost thereof shall be considered included in the prices bid for the respective item."

Page 82

SECTION 7.4 MEASUREMENT AND PAYMENT, Paragraph a. DELETE paragraph a. in its entirety and SUBSTITUTE the following:

"a. The quantity of Bank Gravel, Item 7-1, except in service, and 3-inch and 4-inch pipe trenches, shall be measured for payment by the cubic yard compacted in place. Only gravel placed within the established pay limits or reasonable limits necessary to complete the work as established by the Plans and/or Engineer shall be considered for separate payment as specified. If in the opinion of the Engineer the Contractor has excavated trenches to an excessive width, either through error or for his own convenience, the gravel used to refill the trenches beyond the reasonable widths, as established by the Engineer, shall not be measured for payment. Complete bank

Page 82 (continued)

gravel refill will be required in service trenches and cost thereof shall be considered included in the bid unit prices under Items 9-1 and 9-12 through 9-15.

The quantity of Crushed Stone, Item 7-2, shall be measured by the cubic yard compacted in place. Crushed Stone used to refill unauthorized excavations or included for payment under other items of the Proposal will not be measured under this item."

Page 83

SECTION 8.1 SCOPE, Paragraph b., Item 9. DELETE Item 9. in its entirety and SUBSTITUTE the following:

"9. Placing of 3-inch Bituminous Paving over all excavations in accordance with Plans and Section 11 of these Specifications."

Page 85

SECTION 8.2 GENERAL, Paragraph c., Item 1. DELETE the following in lines 5 and 6 of Item 1: "(See Section 8.2c and 403.3)" SUBSTITUTE the following:

"(See Section 403.0)"

Page 99

SECTION 8.3 MATERIALS, WORKMANSHIP, AND CONSTRUCTION METHODS, Paragraph h. DELETE the Title of paragraph h. and SUBSTITUTE the following:

"h. Unscheduled Remobilization and Demobilization"

Page 100

8.4 MEASUREMENT AND PAYMENT, Paragraph c. Tapping Sleeves and Valves. Line 5 of second subparagraph to be DELETED and the following SUBSTITUTED:

"and connecting the bypass line complete, 3-inch bituminous pavement, removal or approved abandonment"

Page 101

8.4 MEASUREMENT AND PAYMENT, Paragraph c., line 3.on page 101. Line 3 to be DELETED and the following SUBSTITUTED:

"and rock excavation will be made under these separate items of"

Paragraph d. ADD the following to the end of the first subparagraph of paragraph d:

"These shall be paid for under the applicable New Pipe item and Pounds of Fittings."

Paragraph d., second subparagraph of Paragraph d., lines 15 and 16 DELETE lines 15 and 16 and SUBSTITUTE the following:

"expense incidental thereto. Payment for bank gravel refill and rock excavation as specified will be made under these separate items of the Proposal. (See also "

Page 102

8.4 MEASUREMENT AND PAYMENT, Paragraph e. on page 102. DELETE "reconnect the pipe, and all labor and all incidental work necessary." and SUBSTITUTE the following:

"reconnect the pipe, furnish and place 3-inch bituminous pavement and all labor and all incidental work necessary."

Paragraph f. Second subparagraph. DELETE third(and last) line of second subparagraph and SUBSTITUTE the following:

"refill except bank gravel, 3-inch bituminous pavement and all incidental work."

Paragraph g., lines 4 and 5. DELETE lines 4 and 5 and SUBSTITUTE the following:

"Proposal, and shall be full compensation for excavation, tap, connections, refill except bank gravel, 3-inch bituminous pavement, and all incidental work."

Page 102 (continued)

Paragraph i, DELETE the first line of paragraph i. and SUBSTITUTE the following:

"i. Payment for gravel backfill and rock excavation will be made under these separate items of the Proposal."

Page 103

SECTION 9.1 SCOPE, Paragraph a., Item 1. DELETE Item 1. in its entirety and SUBSTITUTE the following:

"1. Excavate, backfill, sheet, shore and dewater and resurface with 3-inch bituminous, trenches and other excavations for water mains, services, appurtenances and attendant work."

Page 104

SECTION 9.1 SCOPE, Paragraph b. DELETE Paragraph b. in its entirety and SUBSTITUTE the following:

"b. Rock excavation, and gravel backfill, as specified will be paid for under these separate items of the Proposal. Earth excavation, backfilling (except bank gravel refill), 3-inch bituminous resurfacing and incidental work shall be included for payment in the applicable items of this Section. Fittings required to complete the installations and not included for payment under other items of the Contract shall be paid for in accordance with the Specifications applicable to "ADDITIONAL FITTINGS". "

Page 110

SECTION 9.3 MATERIALS, WORKMANSHIP AND CONSTRUCTION METHODS, Paragraph a., Item 13. DELETE line 3. of Item 13 and SUBSTITUTE the following:

"the Contractor is otherwise directed by the Engineer. If the lead joint at the tee is not"

Page 116

SECTION 9.3 MATERIALS, WORKMANSHIP AND CONSTRUCTION METHODS. Note * at bottom of page to be DELETED and the following SUBSTITUTED:

" * Where practicable, new copper services may be "pulled through" existing lead service locations. Proper installation will be the responsibility of the Contractor. (See Proposal, Page 8j.) "

Page 124

9.3 MATERIALS, WORKMANSHIP AND CONSTRUCTION METHODS, Paragraph 1. Subparagraph 2. is to be renumbered as "3." and a new subparagraph 2. ADDED as follows:

"2. This item shall not apply where the work required to remove materials to gain access to work the valve operator does not require the use of special tools or equipment or where dirt and debris does not restrict operation of the valve operator in the opinion of the Engineer. No payment shall be made under this item unless the Engineer has inspected the box and pre-determined that such cleaning is necessary for proper and/or expeditious operation."

Page 125

9.4 MEASUREMENT AND PAYMENT, Paragraph a., line 4 on page 125. DELETE line 4 in its entirety and SUBSTITUTE the following:

"3-inch bituminous pavement over trenches and all incidentals necessary for completed installations."

Page 126

9.4 MEASUREMENT AND PAYMENT, Paragraph e., second subparagraph. DELETE this second subparagraph and SUBSTITUTE the following:

"Payment shall be made at the Contract unit prices for furnishing and laying or furnishing and relaying service pipe with copper service tubing or 3-inch or 4-inch pipe. The prices shall include removing existing services from trenches, laying and connecting the new service and providing any special adaptors needed to connect the new service to the existing, sand for bedding, 100% bank gravel backfill, 3-inch bituminous pavement, compacting, the cost of making all tests including furnishing labor, equipment, apparatus, water and materials for the tests, and the replacement of any materials which may become necessary as a result of the tests."

Page 136

11.4 MEASUREMENT AND PAYMENT, Paragraph a., Item 1. DELETE Item 1. in its entirety and SUBSTITUTE the following:

"1. Temporary bituminous paving shall be measured by the square yard placed to a 3-inch depth."

Page 58

SECTION 405.0 RESPONSIBILITIES OF CONTRACTOR, Paragraph 405.4, second subparagraph. DELETE "H-1 - Sewers....and Clarendon Street" and SUBSTITUTE the following:

""H-1" - Sewers and drains in Warren Avenue, Dartmouth Street, Pembroke Street, Lawrence Street, Appleton Street, Dartmouth Place and a section of West Canton Street at Columbus Avenue.

"H-2" - Sewers and drains in Columbus Avenue, Coventry Street, West Springfield Street, Worcester Street, Rutland Square, St. Cyprion Street, West Newton Street, and a section of West Canton Street at Columbus Avenue.

"H-3" - Sewers and drains in Tremont Street, Clarendon Street, Public Alley 705, East Berkeley Street, Columbus Avenue, Yarmouth Street, Dartmouth Street, West Concord Street and a section of West Canton Street at Columbus Avenue. "

Pages 129a and 129b

Revised Detail Sheets, Pages 129a and 129b of the Specifications, are attached hereto as Attachment 1

Page 137

SECTION 11.4 MEASUREMENT AND PAYMENT, Paragraph b., Item 1. DELETE Item 1. in its entirety and SUBSTITUTE the following:

" 1. Three-Inch Temporary Bituminous Pavement, Item 11-1, will be paid for at the Contract unit price per square yard only at locations as may be designated by the Engineer. Such payment shall include full compensation for preparing the subbase as herein specified and all incidental work. Three-Inch Temporary Bituminous Pavement, whether thus elsewhere specified or not, shall be considered included for payment under the related item of the Proposal that requires the removal of the existing pavement. (i.e., linear foot of mains or services, valves, obstructions, hydrants, removals of blow-offs and the like.) Payment under this item is only to be made for unanticipated temporary pavements if ordered by the Engineer. "

Page 138

SECTION 11.4 MEASUREMENT AND PAYMENT, Paragraph b., Item 6. DELETE Item 6. in its entirety and SUBSTITUTE the following:

"6. Tack coat used for resurfacing of excavations to bond new bituminous to existing cut pavement edges and at castings shall be included for payment under the applicable item of the Proposal under which the bituminous resurfacing is included for payment, or it shall be included under Item 11-1 should payment be made under this item."

REVISIONS TO DRAWINGS

Sheet 1 of 19

ADDED available applicable boring locations. Also, see boring logs which are Attachment No. 3 to this Addendum.

Sheet 2 of 19

ADD General Note No. 43 as follows:

" No. 43 Data available from City of Boston Highway Department records is helpful but depths of pavements and bases are frequently greater than indicated on those records. "

DELETE General Notes Nos. 38 through 41 in their entirety.

BORING LOGS

See Attachment No. 3 which consists of 33 pages of Boring Logs.

attachment No. 2

SECOND ADVERTISING PROPOSAL - BIDDER'S FORM -REVISED 9/12/75 by ADDENDUM No. 1

The Contractor hereby offers to provide all necessary machinery, tools and apparatus and to do all the work and furnish all the materials called for by the Contract Documents of Site Preparation Contract "M-1" in the manner and time prescribed and according to the requirements of the Authority, including all the incidental work, and to complete the work within one hundred eighty calendar days. (See Specifications, Section 403.0)

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
6-1	250 TOKEN	Cubic yards of Rock Excavation, including disposal, at Forty Dollars and No Cents Per Cubic Yard	40	00	10,000	00
6-2	300 TOKEN	Cubic yards of Test Pits and Miscellaneous Excavation including refilling and 3" Bituminous Pavement, at Fifteen Dollars and No Cents Per Cubic Yard	15	00	4,500	00
6-3	200 TOKEN	Cubic yards of Earth Excavation Below Grade, at Twenty-two Dollars and No Cents Per Cubic Yard	22	00	4,400	00
6-4	20	Remove Existing Water Line Main Valve 6 Inches or Greater on Water Lines to Remain in Service, at Four Hundred Dollars and No Cents Each	400	00	8,000	00
6-5	1 TOKEN	Remove Existing Water Line Main Valve 6 inches or Greater on Water Lines to be Abandoned, at Five Hundred Dollars and No Cents Each	500	00	500	00
6-6	10 TOKEN	Remove Existing Service Gate or Meter in Street Boxes, on services to be abandoned, at One Hundred Fifty Dollars and No Cents Each	150	00	1500	00
6-7	1 TOKEN	Remove Existing Blow-Off and Plug Tee at Main, at Six Hundred Dollars and No Cents Each	600	00	600	00
		8-a				

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
-1	6,000	Cubic Yards of Bank Gravel refill, as required by the Plans and directed by the Engineer, and for all trench refill where required except at new services or relay of services 4 inches in diameter or less, at _____ Per Cubic Yard				
7-2	500	Cubic Yards of Grading Size No. 67 Crushed Stone, (3/4-inch to No. 4) furnished and placed by the authority of the Engineer, at _____ Per Cubic Yard				
8-1	300	Linear feet of furnishing and laying 2-inch Temporary Bypass Pipe for Domestic Service, including temporary services, maintenance, fittings, valves, removal, 3" Bituminous Pavement at Depressions and all incidental work, at _____ Per Linear Foot				
8-2	24,000	Linear feet of furnishing and laying 4-Inch Temporary Bypass Pipe for Domestic Service, including temporary services, maintenance, fittings, valves, removal, 3" Bituminous Pavement at Depressions and all incidental work, at _____ Per Linear Foot				
8-3	21,000	Linear feet of furnishing and laying 4-Inch Temporary Bypass Pipe for Fire Protection, including temporary services, maintenance, fittings, valves, removal, 3" Bituminous Pavement at Depressions, and all incidental work, at _____ Per Linear Foot				
8-4	450	Linear feet of furnishing and laying 6-Inch Temporary Bypass Pipe for Fire or Domestic Service, including temporary services, maintenance, fittings, valves, removal, 3" Bituminous Pavement at Depressions, and all incidental work, at _____ Per Linear Foot				

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
8-5	93	Furnish and install Temporary Fire Hydrants, complete, including tee branch, temporary service pipe, valves, fittings, maintenance, removal and all incidental work, at Each				
8-6	1 TOKEN	Furnish and set 12-inch x 4-inch or 12-inch x 6-inch Tapping Sleeve and Valve, complete, including excavation, temporary bypass line and all connections, removal, refilling, 3-inch bituminous pavement, and all incidental work, at One Thousand Five Hundred Dollars and No Cents Each	1,500	00	1,500	00
8-7	3,700	Cleaning and Cement Lining 8-Inch Cast Iron Water Pipe, complete, including excavation, refilling, 3" Bituminous Pavement, and all incidental work, at Per Linear Foot				
8-8	10,500	Cleaning and Cement Lining 12-Inch Cast Iron Water Pipe, complete, including excavation, refilling, 3" Bituminous Pavement, and all incidental work, at Per Linear Foot				
8-9	400	Cleaning and Cement Lining 20-Inch Cast Iron Water Pipe, complete, including excavation, refilling, 3" Bituminous Pavement, and all incidental work, at Per Linear Foot				
8-10	15 TOKEN	Obstruction in Pipes To Be Cleaned and Cement Lined, complete, including excavation, removal and connections, refilling, 3-inch bituminous pavement and all incidental work, at One thousand Dollars and No Cents Each	$ 1,000	00	15,000	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
8-11	5 TOKEN	Plugged Service, complete, including excavations, removal and connections, refilling, 3" Bituminous Pavement, and all incidental work, at Two Hundred Fifty Dollars and No Cents Each	250	00	1,250	00
8-12	40 TOKEN	Tap Hole in Existing Service, complete, including excavation, tap connections, refilling, 3" Bituminous Pavement, and all incidental work, at Three Hundred Dollars and No Cents Each	300	00	12,000	00
8-13	1 TOKEN	Unscheduled Remobilization and Demobilization for additional work or work ordered out of sequence, at One Thousand Five Hundred Dollars and No Cents Each	1,500	00	1,500	00
9-1	400	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 3-Inch or 4-Inch C.I.C.L. or D.I.C.L. Water Pipe, including all connections. 3" Bituminous Pavement, Sand Bedding, Bank Gravel Refill, and all incidental work, at Per Linear Foot				
9-2	450	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 6-Inch D.I.C.L. Water Pipe, including all connections, refilling, 3-inch bituminous pavement and all incidental work, at Per Linear Foot				
9-3	4,750	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 8-Inch D.I.C.L. Water Pipe, including all connections, refilling, 3-inch bituminous pavement and all incidental work, at Per Linear Foot				

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
9-4	1,100	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 12-inch D.I.C.L. Water Pipe, including all connections, refilling, 3-inch bituminous pavement and all incidental work, at Per Linear Foot				
9-5	10 TOKEN	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 20-Inch D.I.C.L. Water Pipe, including all connections, refilling, 3-inch bituminous pavement and all incidental work, at Sixty-five Dollars and No Cents Per Linear Foot	65	00	650	00
9-6	73,000	Pounds of Additional Fittings, furnished and set, including all incidental work, at One Dollar and No Cents Per Pound	1	00	73,000	00
9-7	15	Furnish and set 3-Inch or 4-Inch Gate, complete in place, including box, excavation, removal of existing gate or pipe section, refilling, 3" Bituminous Pavement, and all incidental work, at Each				
9-8	40	Furnish and set 6-Inch Gate, complete in place, including box, excavation, removal of existing valve or pipe section, refilling, 3" Bituminous Pavement, and all incidental work, at Each				
9-9	50	Furnish and set 8-Inch Gate, complete in place, including box, excavation, removal of existing valve or pipe section, refilling, 3" Bituminous Pavement, and all incidental work, at Each				

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
9-10	75	Furnish and set 12-Inch Gate, complete in place, including box, excavation, removal of existing valve or pipe section, refilling, 3-inch bituminous pavement, and all incidental work, at Each				
9-11		Not Applicable Each	NOT APPLICABLE			
9-12	8,000	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 3/4-Inch Copper Service Pipe, including all connections, bank gravel refill, sand bedding, 3-inch bituminous pavement, and all incidental work, at Per Linear Foot				
9-13	600	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 1-Inch Copper Service Pipe, including all connections, bank gravel refill, sand bedding, 3-inch bituminous pavement, and all incidental work, at Per Linear Foot				
9-14	500	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 1-1/2-Inch Copper Service Pipe, including all connections, bank gravel refill, sand bedding, 3-inch bituminous pavement, and all incidental work, at Per Linear Foot				
9-15	200	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 2-Inch Copper Service Pipe, including all connections, bank gravel refill, sand bedding, 3" bituminous pavement, and all incidental work, at Per Linear Foot				

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
16	300	Furnish and set 3/4-Inch Corporation Stop, complete in place, including all drilling and tapping of the main, and all incidental work, at _____ Each				
9-17	11	Furnish and set 1-Inch Corporation Stop, complete in place, including all drilling and tapping of the main, and all incidental work, at _____ Each				
9-18	20	Furnish and set 1-1/2-Inch Corporation Stop, complete in place, including all drilling and tapping of the main, box, frame and cover, and all incidental work, at _____ Each				
9-19	11	Furnish and set 1-1/2-Inch Corporation Stop with 1-1/2" x 2" Adapter, complete in place, including all drilling and tapping of the main, box, frame and cover, and all incidental work, at _____ Each				
9-20	300	Furnish and set 3/4-Inch Curb Stop, complete in place, including all connections to services and all incidental work, at _____ Each				
9-21	11	Furnish and set 1-Inch Curb Stop, complete in place, including all connections to services and all incidental work, at _____ Each				

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
9-22	1 TOKEN	Install New Water Meter, including all connections, additional hardware and all incidental work, at Fifty Dollars and No Cents Each	50	00	50	00
9-23	25	Hydrant, furnished and set, complete in place, including all necessary connections, removal of existing hydrant, if any, tie rods, refilling, crushed stone for drainage, 3-inch bituminous pavement, and all incidental work, at Each				
9-24	1 TOKEN	Hydrant Removed, and not replaced, including all necessary excavation, refilling 3-inch bituminous pavement and all incidental work, at Six Hundred Dollars and No Cents Each	600	00	600	00
9-25	4 TOKEN	Adjust Valve or Corporation Stop Box to Grade including cleaning, excavation, refilling, 3-inch bituminous pavement, and all incidental work, at One Hundred Dollars and No Cents Each	100	00	400	00
9-26	4 TOKEN	Clean Valve or Corporation Stop Box, at Fifty Dollars and No Cents	50	00	200	00
9-27	2	Furnish and install Watertight Plug, complete in place, including excavation, refilling, 3-inch bituminous pavement, and all incidental work, at Each				

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
10-1	100	Cubic yards of Cement Concrete Masonry for pipe restraint, encasement, or for any other purpose as directed, including reinforcing steel and all incidental work, at Per Cubic Yard				
11-1	1,000 TOKEN	Square yards of 3-inch Temporary Bituminous Pavement, for unanticipated miscellaneous patching where directed by the Engineer, at Eight Dollars and No Cents Per Square Yard	8	00	8,000	00
11-2	250 TOKEN	Tons of 3-Inch Cold Patch Paving, at Forty Dollars and No Cents Per Ton	40	00	10,000	00
11-3	5 TOKEN	Remove and Reset Existing Brick Sidewalk or Gutter, complete in place, at Sixty Dollars and No Cents Per Square Yard	60	00	300	00
11-4	5 TOKEN	Remove and Replace Mortared Brick Sidewalk or Gutter, at Twenty Dollars and No Cents Per Cubic Foot	20	00	100	00
12-1	1	Engineer's Field Office, complete, including equipment, utilities and services, maintenance and fencing, at Lump Sum				

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
13-1	2,300	Hours of Special Duty Police supplied by the Contractor, at Nine Dollars and No Cents Per Hour	9	00	20,700	00
13-2	100	Hours of Special Duty Police Sergeant supplied by the Contractor, at Eight Dollars and Twenty-Five Cents Per Hour	8	25	825	00
		TOTAL - SITE PREPARATION CONTRACT "M-1"				

Note 1. In accordance with common practice, where a quantity is labelled "Token", use of the item is either not anticipated or no estimate of quantity can be made, but the item is included to establish a price under this Contract, usually in the event such work is required owing to unforeseen field conditions. The unit prices of these items under this contract are established ("fixed"); the unit prices of certain other items are also "fixed".

Note 2. Payment under those items for which quantities are shown in the above Proposal shall constitute full payment for all of the work required under this Contract as indicated on the Drawings and delineated in the Specifications.

Note 3. In case of a discrepancy between the unit prices written in words and unit prices written in figures, the written words shall govern.

SECOND ADVERTISING PROPOSAL - BIDDER'S FORM -REVISED 9/12/75 by ADDENDUM No. 1

The Contractor hereby offers to provide all necessary machinery, tools and apparatus and to do all the work and furnish all the materials called for by the Contract Documents of Site Preparation Contract "M-1" in the manner and time prescribed and according to the requirements of the Authority, including all the incidental work, and to complete the work within one hundred eighty calendar days. (See Specifications, Section 403.0)

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
6-1	250 TOKEN	Cubic yards of Rock Excavation, including disposal, at Forty Dollars and No Cents Per Cubic Yard	40	00	10,000	00
6-2	300 TOKEN	Cubic yards of Test Pits and Miscellaneous Excavation including refilling and 3" Bituminous Pavement, at Fifteen Dollars and No Cents Per Cubic Yard	15	00	4,500	00
6-3	200 TOKEN	Cubic yards of Earth Excavation Below Grade, at Twenty-two Dollars and No Cents Per Cubic Yard	22	00	4,400	00
6-4	20	Remove Existing Water Line Main Valve 6 Inches or Greater on Water Lines to Remain in Service, at Four Hundred Dollars and No Cents Each	400	00	8,000	00
6-5	1 TOKEN	Remove Existing Water Line Main Valve 6 inches or Greater on Water Lines to be Abandoned, at Five Hundred Dollars and No Cents Each	500	00	500	00
6-6	10 TOKEN	Remove Existing Service Gate or Meter in Street Boxes, on services to be abandoned, at One Hundred Fifty Dollars and No Cents Each	150	00	1500	00
6-7	1 TOKEN	Remove Existing Blow-Off and Plug Tee at Main, at Six Hundred Dollars and No Cents Each	600	00	600	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
7-1	6,000	Cubic Yards of Bank Gravel refill, as required by the Plans and directed by the Engineer, and for all trench refill where required except at new services or relay of services 4 inches in diameter or less, at Per Cubic Yard				
7-2	500	Cubic Yards of Grading Size No. 67 Crushed Stone, (3/4-inch to No. 4) furnished and placed by the authority of the Engineer, at Per Cubic Yard				
8-1	300	Linear feet of furnishing and laying 2-inch Temporary Bypass Pipe for Domestic Service, including temporary services, maintenance, fittings, valves, removal, 3" Bituminous Pavement at Depressions and all incidental work, at Per Linear Foot				
8-2	24,000	Linear feet of furnishing and laying 4-Inch Temporary Bypass Pipe for Domestic Service, including temporary services, maintenance, fittings, valves, removal, 3" Bituminous Pavement at Depressions and all incidental work, at Per Linear Foot				
8-3	21,000	Linear feet of furnishing and laying 4-Inch Temporary Bypass Pipe for Fire Protection, including temporary services, maintenance, fittings, valves, removal, 3" Bituminous Pavement at Depressions, and all incidental work, at Per Linear Foot				
8-4	450	Linear feet of furnishing and laying 6-Inch Temporary Bypass Pipe for Fire or Domestic Service, including temporary services, maintenance, fittings, valves, removal, 3" Bituminous Pavement at Depressions, and all incidental work, at Per Linear Foot				

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
8-5	93	Furnish and install Temporary Fire Hydrants, complete, including tee branch, temporary service pipe, valves, fittings, maintenance, removal and all incidental work, at Each				
8-6	1 TOKEN	Furnish and set 12-inch x 4-inch or 12-inch x 6-inch Tapping Sleeve and Valve, complete, including excavation, temporary bypass line and all connections, removal, refilling, 3-inch bituminous pavement, and all incidental work, at One Thousand Five Hundred Dollars and No Cents Each	1,500	00	1,500	00
8-7	3,700	Cleaning and Cement Lining 8-Inch Cast Iron Water Pipe, complete, including excavation, refilling, 3" Bituminous Pavement, and all incidental work, at Per Linear Foot				
8-8	10,500	Cleaning and Cement Lining 12-Inch Cast Iron Water Pipe, complete, including excavation, refilling, 3" Bituminous Pavement, and all incidental work, at Per Linear Foot				
8-9	400	Cleaning and Cement Lining 20-Inch Cast Iron Water Pipe, complete, including excavation, refilling, 3" Bituminous Pavement, and all incidental work, at Per Linear Foot				
8-10	15 TOKEN	Obstruction in Pipes To Be Cleaned and Cement Lined, complete, including excavation, removal and connections, refilling, 3-inch bituminous pavement and all incidental work, at One thousand Dollars and No Cents Each	$ 1,000	00	15,000	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
8-11	5 TOKEN	Plugged Service, complete, including excavations, removal and connections, refilling, 3" Bituminous Pavement, and all incidental work, at Two Hundred Fifty Dollars and No Cents Each	250	00	1,250	00
8-12	40 TOKEN	Tap Hole in Existing Service, complete, including excavation, tap connections, refilling, 3" Bituminous Pavement, and all incidental work, at Three Hundred Dollars and No Cents Each	300	00	12,000	00
8-13	1 TOKEN	Unscheduled Remobilization and Demobilization for additional work or work ordered out of sequence, at One Thousand Five Hundred Dollars and No Cents Each	1,500	00	1,500	00
9-1	400	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 3-Inch or 4-Inch C.I.C.L. or D.I.C.L. Water Pipe, including all connections, 3" Bituminous Pavement, Sand Bedding, Bank Gravel Refill, and all incidental work, at Per Linear Foot				
9-2	450	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 6-Inch D.I.C.L. Water Pipe, including all connections, refilling, 3-inch bituminous pavement and all incidental work, at Per Linear Foot				
9-3	4,750	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 8-Inch D.I.C.L. Water Pipe, including all connections, refilling, 3-inch bituminous pavement and all incidental work, at Per Linear Foot				

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
9-4	1,100	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 12-inch D.I.C.L. Water Pipe, including all connections, refilling, 3-inch bituminous pavement and all incidental work, at Per Linear Foot				
9-5	10 TOKEN	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 20-Inch D.I.C.L. Water Pipe, including all connections, refilling, 3-inch bituminous pavement and all incidental work, at Sixty-five Dollars and No Cents Per Linear Foot	65	00	650	00
9-6	73,000	Pounds of Additional Fittings, furnished and set, including all incidental work, at One Dollar and No Cents Per Pound	1	00	73,000	00
9-7	15	Furnish and set 3-Inch or 4-Inch Gate, complete in place, including box, excavation, removal of existing gate or pipe section, refilling, 3" Bituminous Pavement, and all incidental work, at Each				
9-8	40	Furnish and set 6-Inch Gate, complete in place, including box, excavation, removal of existing valve or pipe section, refilling, 3" Bituminous Pavement, and all incidental work, at Each				
9-9	50	Furnish and set 8-Inch Gate, complete in place, including box, excavation, removal of existing valve or pipe section, refilling, 3" Bituminous Pavement, and all incidental work, at Each				

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
9-10	75	Furnish and set 12-Inch Gate, complete in place, including box, excavation, removal of existing valve or pipe section, refilling, 3-inch bituminous pavement, and all incidental work, at Each				
9-11		Not Applicable Each	NOT APPLICABLE			
9-12	8,000	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 3/4-Inch Copper Service Pipe, including all connections, bank gravel refill, sand bedding, 3-inch bituminous pavement, and all incidental work, at Per Linear Foot				
9-13	600	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 1-Inch Copper Service Pipe, including all connections, bank gravel refill, sand bedding, 3-inch bituminous pavement, and all incidental work, at Per Linear Foot				
9-14	500	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 1-1/2-Inch Copper Service Pipe, including all connections, bank gravel refill, sand bedding, 3-inch bituminous pavement, and all incidental work, at Per Linear Foot				
9-15	200	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 2-Inch Copper Service Pipe, including all connections, bank gravel refill, sand bedding, 3" bituminous pavement, and all incidental work, at Per Linear Foot				

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
9-16	300	Furnish and set 3/4-Inch Corporation Stop, complete in place, including all drilling and tapping of the main, and all incidental work, at Each				
9-17	11	Furnish and set 1-Inch Corporation Stop, complete in place, including all drilling and tapping of the main, and all incidental work, at Each				
9-18	20	Furnish and set 1-1/2-Inch Corporation Stop, complete in place, including all drilling and tapping of the main, box, frame and cover, and all incidental work, at Each				
9-19	11	Furnish and set 1-1/2-Inch Corporation Stop with 1-1/2" x 2" Adapter, complete in place, including all drilling and tapping of the main, box, frame and cover, and all incidental work, at Each				
9-20	300	Furnish and set 3/4-Inch Curb Stop, complete in place, including all connections to services and all incidental work, at Each				
9-21	11	Furnish and set 1-Inch Curb Stop, complete in place, including all connections to services and all incidental work, at Each				

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
9-22	1 TOKEN	Install New Water Meter, including all connections, additional hardware and all incidental work, at Fifty Dollars and No Cents Each	50	00	50	00
9-23	25	Hydrant, furnished and set, complete in place, including all necessary connections, removal of existing hydrant, if any, tie rods, refilling, crushed stone for drainage, 3-inch bituminous pavement, and all incidental work, at Each				
9-24	1 TOKEN	Hydrant Removed, and not replaced, including all necessary excavation, refilling 3-inch bituminous pavement and all incidental work, at Six Hundred Dollars and No Cents Each	600	00	600	00
9-25	4 TOKEN	Adjust Valve or Corporation Stop Box to Grade including cleaning, excavation, refilling, 3-inch bituminous pavement, and all incidental work, at One Hundred Dollars and No Cents Each	100	00	400	00
9-26	4 TOKEN	Clean Valve or Corporation Stop Box, at Fifty Dollars and No Cents	50	00	200	00
9-27	2	Furnish and install Watertight Plug, complete in place, including excavation, refilling, 3-inch bituminous pavement, and all incidental work, at Each				

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
10-1	100	Cubic yards of Cement Concrete Masonry for pipe restraint, encasement, or for any other purpose as directed, including reinforcing steel and all incidental work, at Per Cubic Yard				
11-1	1,000 TOKEN	Square yards of 3-inch Temporary Bituminous Pavement, for unanticipated miscellaneous patching where directed by the Engineer, at Eight Dollars and No Cents Per Square Yard	8	00	8,000	00
11-2	250 TOKEN	Tons of 3-Inch Cold Patch Paving, at Forty Dollars and No Cents Per Ton	40	00	10,000	00
11-3	5 TOKEN	Remove and Reset Existing Brick Sidewalk or Gutter, complete in place, at Sixty Dollars and No Cents Per Square Yard	60	00	300	00
11-4	5 TOKEN	Remove and Replace Mortared Brick Sidewalk or Gutter, at Twenty Dollars and No Cents Per Cubic Foot	20	00	100	00
12-1	1	Engineer's Field Office, complete, including equipment, utilities and services, maintenance and fencing, at Lump Sum				

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
13-1	2,300	Hours of Special Duty Police supplied by the Contractor, at Nine Dollars and No Cents Per Hour	9	00	20,700	00
13-2	100	Hours of Special Duty Police Sergeant supplied by the Contractor, at Eight Dollars and Twenty-Five Cents Per Hour	8	25	825	00
		TOTAL - SITE PREPARATION CONTRACT "M-1"				

Note 1. In accordance with common practice, where a quantity is labelled "Token", use of the item is either not anticipated or no estimate of quantity can be made, but the item is included to establish a price under this Contract, usually in the event such work is required owing to unforeseen field conditions. The unit prices of these items under this contract are established ("fixed"); the unit prices of certain other items are also "fixed".

Note 2. Payment under those items for which quantities are shown in the above Proposal shall constitute full payment for all of the work required under this Contract as indicated on the Drawings and delineated in the Specifications.

Note 3. In case of a discrepancy between the unit prices written in words and unit prices written in figures, the written words shall govern.

Attachment No. 2

SECOND ADVERTISING PROPOSAL - BIDDER'S FORM -REVISED 9/12/75 by ADDENDUM No. 1

The Contractor hereby offers to provide all necessary machinery, tools and apparatus and to do all the work and furnish all the materials called for by the Contract Documents of Site Preparation Contract "M-1" in the manner and time prescribed and according to the requirements of the Authority, including all the incidental work, and to complete the work within one hundred eighty calendar days. (See Specifications, Section 403.0)

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
6-1	250 TOKEN	Cubic yards of Rock Excavation, including disposal, at Forty Dollars and No Cents Per Cubic Yard	40	00	10,000	00
6-2	300 TOKEN	Cubic yards of Test Pits and Miscellaneous Excavation including refilling and 3" Bituminous Pavement, at Fifteen Dollars and No Cents Per Cubic Yard	15	00	4,500	00
6-3	200 TOKEN	Cubic yards of Earth Excavation Below Grade, at Twenty-two Dollars and No Cents Per Cubic Yard	22	00	4,400	00
6-4	20	Remove Existing Water Line Main Valve 6 Inches or Greater on Water Lines to Remain in Service, at Four Hundred Dollars and No Cents Each	400	00	8,000	00
6-5	1 TOKEN	Remove Existing Water Line Main Valve 6 inches or Greater on Water Lines to be Abandoned, at Five Hundred Dollars and No Cents Each	500	00	500	00
6-6	10 TOKEN	Remove Existing Service Gate or Meter in Street Boxes, on services to be abandoned, at One Hundred Fifty Dollars and No Cents Each	150	00	1500	00
6-7	1 TOKEN	Remove Existing Blow-Off and Plug Tee at Main, at Six Hundred Dollars and No Cents Each	600	00	600	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
7-1	6,000	Cubic Yards of Bank Gravel refill, as required by the Plans and directed by the Engineer, and for all trench refill where required except at new services or relay of services 4 inches in diameter or less, at Per Cubic Yard				
7-2	500	Cubic Yards of Grading Size No. 67 Crushed Stone, (3/4-inch to No. 4) furnished and placed by the authority of the Engineer, at Per Cubic Yard				
8-1	300	Linear feet of furnishing and laying 2-inch Temporary Bypass Pipe for Domestic Service, including temporary services, maintenance, fittings, valves, removal, 3" Bituminous Pavement at Depressions, and all incidental work, at Per Linear Foot				
8-2	24,000	Linear feet of furnishing and laying 4-Inch Temporary Bypass Pipe for Domestic Service, including temporary services, maintenance, fittings, valves, removal, 3" Bituminous Pavement at Depressions and all incidental work, at Per Linear Foot				
8-3	21,000	Linear feet of furnishing and laying 4-Inch Temporary Bypass Pipe for Fire Protection, including temporary services, maintenance, fittings, valves, removal, 3" Bituminous Pavement at Depressions, and all incidental work, at Per Linear Foot				
8-4	450	Linear feet of furnishing and laying 6-Inch Temporary Bypass Pipe for Fire or Domestic Service, including temporary services, maintenance, fittings, valves, removal, 3" Bituminous Pavement at Depressions, and all incidental work, at Per Linear Foot				

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
8-5	93	Furnish and install Temporary Fire Hydrants, complete, including tee branch, temporary service pipe, valves, fittings, maintenance, removal and all incidental work, at Each				
8-6	1 TOKEN	Furnish and set 12-inch x 4-inch or 12-inch x 6-inch Tapping Sleeve and Valve, complete, including excavation, temporary bypass line and all connections, removal, refilling, 3-inch bituminous pavement, and all incidental work, at One Thousand Five Hundred Dollars and No Cents Each	1,500	00	1,500	00
8-7	3,700	Cleaning and Cement Lining 8-Inch Cast Iron Water Pipe, complete, including excavation, refilling, 3" Bituminous Pavement, and all incidental work, at Per Linear Foot				
8-8	10,500	Cleaning and Cement Lining 12-Inch Cast Iron Water Pipe, complete, including excavation, refilling, 3" Bituminous Pavement, and all incidental work, at Per Linear Foot				
8-9	400	Cleaning and Cement Lining 20-Inch Cast Iron Water Pipe, complete, including excavation, refilling, 3" Bituminous Pavement, and all incidental work, at Per Linear Foot				
8-10	15 TOKEN	Obstruction in Pipes To Be Cleaned and Cement Lined, complete, including excavation, removal and connections, refilling, 3-inch bituminous pavement and all incidental work, at One thousand Dollars and No Cents Each	1,000	00	15,000	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
8-11	5 TOKEN	Plugged Service, complete, including excavations, removal and connections, refilling, 3" Bituminous Pavement, and all incidental work, at Two Hundred Fifty Dollars and No Cents Each	250	00	1,250	00
8-12	40 TOKEN	Tap Hole in Existing Service, complete, including excavation, tap connections, refilling, 3" Bituminous Pavement, and all incidental work, at Three Hundred Dollars and No Cents Each	300	00	12,000	00
8-13	1 TOKEN	Unscheduled Remobilization and Demobilization for additional work or work ordered out of sequence, at One Thousand Five Hundred Dollars and No Cents Each	1,500	00	1,500	00
9-1	400	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 3-Inch or 4-Inch C.I.C.L. or D.I.C.L. Water Pipe, including all connections, 3" Bituminous Pavement, Sand Bedding, Bank Gravel Refill, and all incidental work, at Per Linear Foot				
9-2	450	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 6-Inch D.I.C.L. Water Pipe, including all connections, refilling, 3-inch bituminous pavement and all incidental work, at Per Linear Foot				
9-3	4,750	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 8-Inch D.I.C.L. Water Pipe, including all connections, refilling, 3-inch bituminous pavement and all incidental work, at Per Linear Foot				

SECOND ADVERTISING REVISED SEPTEMBER 12, 1975 by ADDENDUM NO. 1

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
9-4	1,100	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 12-inch D.I.C.L. Water Pipe, including all connections, refilling, 3-inch bituminous pavement and all incidental work, at Per Linear Foot				
9-5	10 TOKEN	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 20-Inch D.I.C.L. Water Pipe, including all connections, refilling, 3-inch bituminous pavement and all incidental work, at Sixty-five Dollars and No Cents Per Linear Foot	65	00	650	00
9-6	73,000	Pounds of Additional Fittings, furnished and set, including all incidental work, at One Dollar and No Cents Per Pound	1	00	73,000	00
9-7	15	Furnish and set 3-Inch or 4-Inch Gate, complete in place, including box, excavation, removal of existing gate or pipe section, refilling, 3" Bituminous Pavement, and all incidental work, at Each				
9-8	40	Furnish and set 6-Inch Gate, complete in place, including box, excavation, removal of existing valve or pipe section, refilling, 3" Bituminous Pavement, and all incidental work, at Each				
9-9	50	Furnish and set 8-Inch Gate, complete in place, including box, excavation, removal of existing valve or pipe section, refilling, 3" Bituminous Pavement, and all incidental work, at Each				

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
9-10	75	Furnish and set 12-Inch Gate, complete in place, including box, excavation, removal of existing valve or pipe section, refilling, 3-inch bituminous pavement, and all incidental work, at Each				
9-11		Not Applicable Each	NOT APPLICABLE			
9-12	8,000	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 3/4-Inch Copper Service Pipe, including all connections, bank gravel refill, sand bedding, 3-inch bituminous pavement, and all incidental work, at Per Linear Foot				
9-13	600	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 1-Inch Copper Service Pipe, including all connections, bank gravel refill, sand bedding, 3-inch bituminous pavement, and all incidental work, at Per Linear Foot				
9-14	500	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 1-1/2-Inch Copper Service Pipe, including all connections, bank gravel refill, sand bedding, 3-inch bituminous pavement, and all incidental work, at Per Linear Foot				
9-15	200	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 2-Inch Copper Service Pipe, including all connections, bank gravel refill, sand bedding, 3" bituminous pavement, and all incidental work, at Per Linear Foot				

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
9-16	300	Furnish and set 3/4-Inch Corporation Stop, complete in place, including all drilling and tapping of the main, and all incidental work, at Each				
9-17	11	Furnish and set 1-Inch Corporation Stop, complete in place, including all drilling and tapping of the main, and all incidental work, at Each				
9-18	20	Furnish and set 1-1/2-Inch Corporation Stop, complete in place, including all drilling and tapping of the main, box, frame and cover, and all incidental work, at Each				
9-19	11	Furnish and set 1-1/2-Inch Corporation Stop with 1-1/2" x 2" Adapter, complete in place, including all drilling and tapping of the main, box, frame and cover, and all incidental work, at Each				
9-20	300	Furnish and set 3/4-Inch Curb Stop, complete in place, including all connections to services and all incidental work, at Each				
9-21	11	Furnish and set 1-Inch Curb Stop, complete in place, including all connections to services and all incidental work, at Each				

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
9-22	1	Install New Water Meter, including all connections, additional hardware and all incidental work, at Fifty Dollars and No Cents				
	TOKEN	Each	50	00	50	00
9-23	25	Hydrant, furnished and set, complete in place, including all necessary connections, removal of existing hydrant, if any, tie rods, refilling, crushed stone for drainage, 3-inch bituminous pavement, and all incidental work, at				
		Each				
9-24	1	Hydrant Removed, and not replaced, including all necessary excavation, refilling 3-inch bituminous pavement and all incidental work, at Six Hundred Dollars and No Cents				
	TOKEN	Each	600	00	600	00
9-25	4	Adjust Valve or Corporation Stop Box to Grade including cleaning, excavation, refilling, 3-inch bituminous pavement, and all incidental work, at One Hundred Dollars and No Cents				
	TOKEN	Each	100	00	400	00
9-26	4	Clean Valve or Corporation Stop Box, at Fifty Dollars and No Cents				
	TOKEN		50	00	200	00
9-27	2	Furnish and install Watertight Plug, complete in place, including excavation, refilling, 3-inch bituminous pavement, and all incidental work, at				
		Each				

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
10-1	100	Cubic yards of Cement Concrete Masonry for pipe restraint, encasement, or for any other purpose as directed, including reinforcing steel and all incidental work, at Per Cubic Yard				
11-1	1,000 TOKEN	Square yards of 3-inch Temporary Bituminous Pavement, for unanticipated miscellaneous patching where directed by the Engineer, at Eight Dollars and No Cents Per Square Yard	8	00	8,000	00
11-2	250 TOKEN	Tons of 3-Inch Cold Patch Paving, at Forty Dollars and No Cents Per Ton	40	00	10,000	00
11-3	5 TOKEN	Remove and Reset Existing Brick Sidewalk or Gutter, complete in place, at Sixty Dollars and No Cents Per Square Yard	60	00	300	00
11-4	5 TOKEN	Remove and Replace Mortared Brick Sidewalk or Gutter, at Twenty Dollars and No Cents Per Cubic Foot	20	00	100	00
12-1	1	Engineer's Field Office, complete, including equipment, utilities and services, maintenance and fencing, at Lump Sum				

SECOND ADVERTISING REVISED SEPTEMBER 12, 1975 by ADDENDUM NO. 1

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
13-1	2,300	Hours of Special Duty Police supplied by the Contractor, at Nine Dollars and No Cents Per Hour	9	00	20,700	00
13-2	100	Hours of Special Duty Police Sergeant supplied by the Contractor, at Eight Dollars and Twenty-Five Cents Per Hour	8	25	825	00
		TOTAL - SITE PREPARATION CONTRACT "M-1"				

Note 1. In accordance with common practice, where a quantity is labelled "Token", use of the item is either not anticipated or no estimate of quantity can be made, but the item is included to establish a price under this Contract, usually in the event such work is required owing to unforeseen field conditions. The unit prices of these items under this contract are established ("fixed"); the unit prices of certain other items are also "fixed".

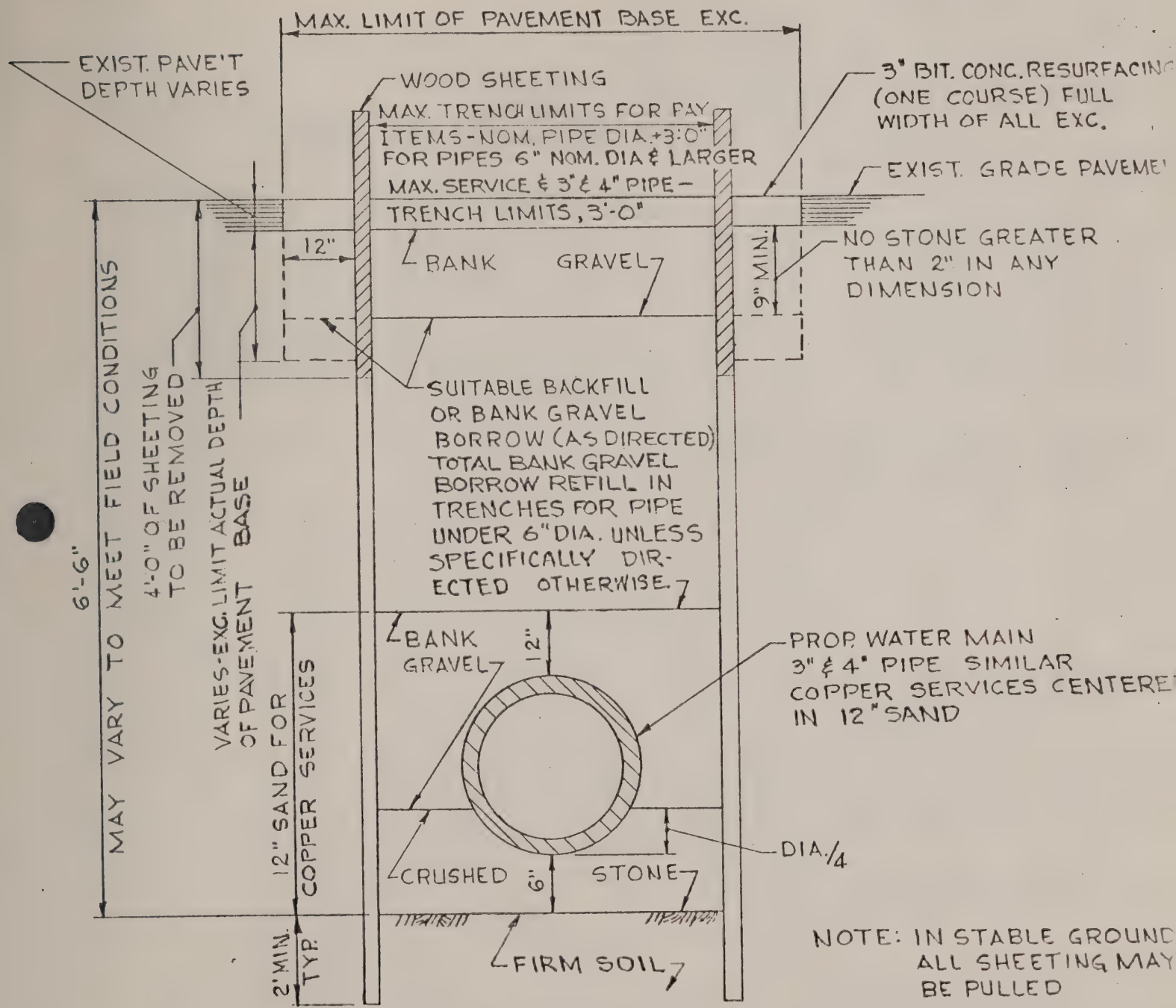
Note 2. Payment under those items for which quantities are shown in the above Proposal shall constitute full payment for all of the work required under this Contract as indicated on the Drawings and delineated in the Specifications.

Note 3. In case of a discrepancy between the unit prices written in words and unit prices written in figures, the written words shall govern.

Attachment No. 1

SITE PREPARATION CONTRACT "M-1" SECOND ADVERTISING ADDENDUM NO. 1

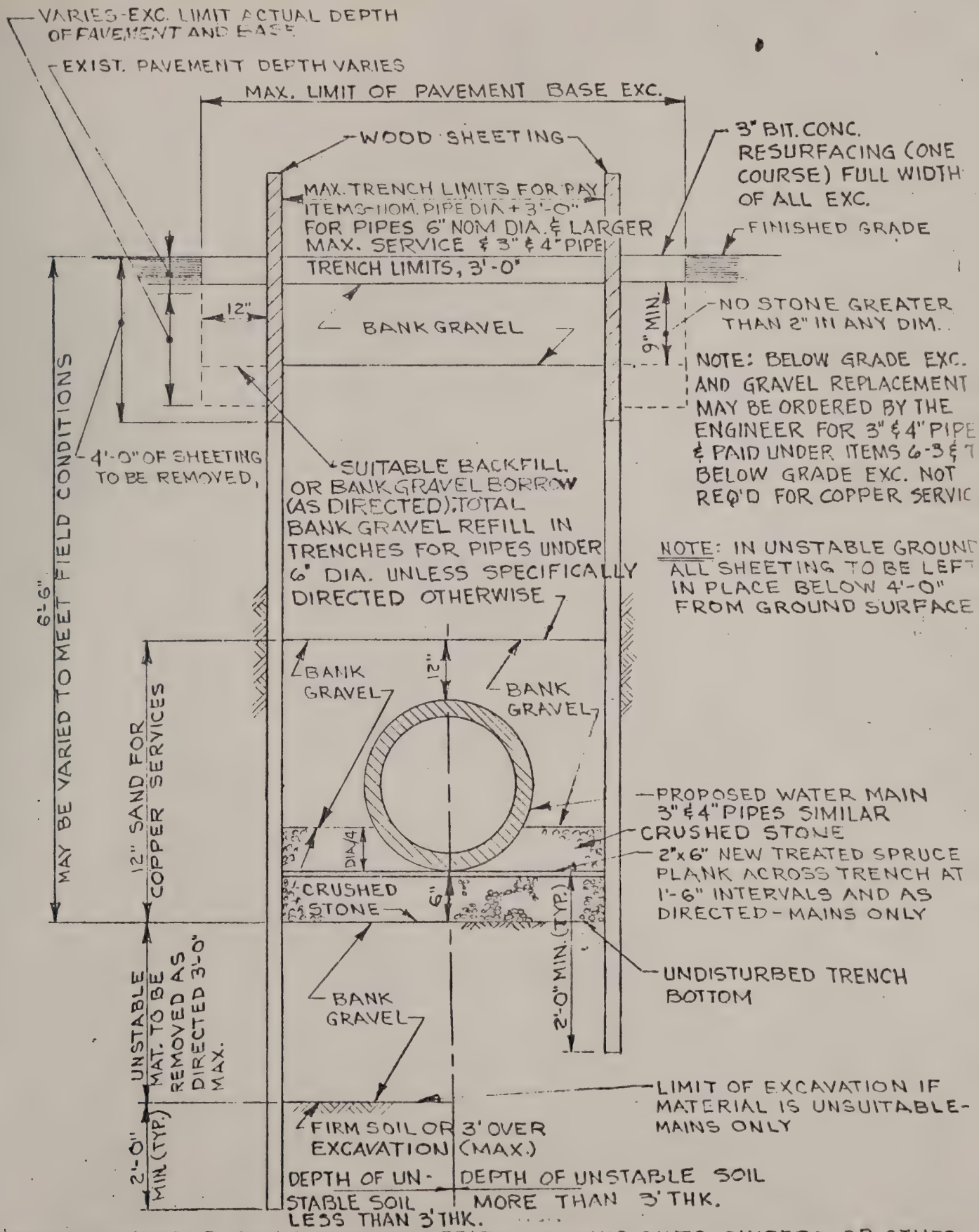
NOTE: THE DETAILS SHOWN SUPERSEDE SIMILAR DETAILS SHOWN ON TYPICAL TRENCH DETAILS FOR FIRM & UNSTABLE GROUND ON CITY OF BOSTON STANDARD DETAIL SHEET NO. 10. ALL OTHER DETAILS AND NOTES APPLY.


MAX. LIMIT OF PAVEMENT BASE EXC.
EXIST. PAVE'T DEPTH VARIES
WOOD SHEETING
MAX. TRENCH LIMITS FOR PAY ITEMS - NOM. PIPE DIA. + 3'-0" FOR PIPES 6" NOM. DIA & LARGER
MAX. SERVICE & 3" & 4" PIPE - TRENCH LIMITS, 3'-0"
3" BIT. CONC. RESURFACING (ONE COURSE) FULL WIDTH OF ALL EXC.
EXIST. GRADE PAVEME
12"
BANK GRAVEL
9" MIN.
NO STONE GREATER THAN 2" IN ANY DIMENSION
SUITABLE BACKFILL OR BANK GRAVEL BORROW (AS DIRECTED) TOTAL BANK GRAVEL BORROW REFILL IN TRENCHES FOR PIPE UNDER 6" DIA. UNLESS SPECIFICALLY DIRECTED OTHERWISE.
6'-6" MAY VARY TO MEET FIELD CONDITIONS
4'-0" OF SHEETING TO BE REMOVED
VARIES - EXC. LIMIT ACTUAL DEPTH OF PAVEMENT BASE
BANK GRAVEL
12"
PROP. WATER MAIN 3" & 4" PIPE SIMILAR COPPER SERVICES CENTERE IN 12" SAND
12" SAND FOR COPPER SERVICES
DIA./4
CRUSHED STONE
6"
2' MIN. TYP.
FIRM SOIL
NOTE: IN STABLE GROUND ALL SHEETING MAY BE PULLED

TYP. TRENCH DETAIL IN STABLE SOIL

NO SCALE

NOTE: THE DETAILS SHOWN SUPERSEDE SIMILAR DETAILS SHOWN ON TYPICAL TRENCH DETAILS FOR FIRM AND UNSTABLE GROUND ON CITY OF BOSTON STANDARD DETAIL SHEET NO. 1) (ALL OTHER DETAILS AND NOTES APPLY.)


VARIES-EXC. LIMIT ACTUAL DEPTH OF PAVEMENT AND BASE
EXIST. PAVEMENT DEPTH VARIES
MAX. LIMIT OF PAVEMENT BASE EXC.
WOOD SHEETING
3" BIT. CONC. RESURFACING (ONE COURSE) FULL WIDTH OF ALL EXC.
MAX. TRENCH LIMITS FOR PAY ITEMS-NOM. PIPE DIA + 3'-0" FOR PIPES 6" NOM DIA. & LARGER MAX. SERVICE & 3" & 4" PIPE
FINISHED GRADE
TRENCH LIMITS, 3'-0"
12"
BANK GRAVEL
9" MIN.
NO STONE GREATER THAN 2" IN ANY DIM.
NOTE: BELOW GRADE EXC. AND GRAVEL REPLACEMENT MAY BE ORDERED BY THE ENGINEER FOR 3" & 4" PIPE & PAID UNDER ITEMS 6-3 & 7 BELOW GRADE EXC. NOT REQ'D FOR COPPER SERVIC
4'-0" OF SHEETING TO BE REMOVED,
SUITABLE BACKFILL OR BANK GRAVEL BORROW (AS DIRECTED). TOTAL BANK GRAVEL REFILL IN TRENCHES FOR PIPES UNDER 6" DIA. UNLESS SPECIFICALLY DIRECTED OTHERWISE
NOTE: IN UNSTABLE GROUND ALL SHEETING TO BE LEFT IN PLACE BELOW 4'-0" FROM GROUND SURFACE
6'-6" MAY BE VARIED TO MEET FIELD CONDITIONS
12" SAND FOR COPPER SERVICES
BANK GRAVEL
12"
BANK GRAVEL
PROPOSED WATER MAIN 3" & 4" PIPES SIMILAR
CRUSHED STONE
DIA/4
2"x6" NEW TREATED SPRUCE PLANK ACROSS TRENCH AT 1'-6" INTERVALS AND AS DIRECTED - MAINS ONLY
CRUSHED STONE
6"
2'-0" MIN. (TYP.)
UNDISTURBED TRENCH BOTTOM
BANK GRAVEL
UNSTABLE MAT. TO BE REMOVED AS DIRECTED 3'-0" MAX.
LIMIT OF EXCAVATION IF MATERIAL IS UNSUITABLE-MAINS ONLY
2'-0" MIN (TYP.)
FIRM SOIL OR EXCAVATION
3' OVER (MAX.)
DEPTH OF UNSTABLE SOIL LESS THAN 3' THK.
DEPTH OF UNSTABLE SOIL MORE THAN 3' THK.

NOTE: UNSTABLE SOILS ARE SOFT PEATS, ORGANIC SILTS, CINDERS OR OTHER SOFT SATURATED SOILS WHICH IN THE OPINION OF THE ENGINEER CANNOT SUPPORT THE WEIGHT OF THE PIPE AND REFILL

TYPICAL TRENCH DETAIL IN UNSTABLE SOILS

NO SCALE

Copy for A. Landers — ENGINEER'S ESTIMATE — REVISED BY ADDENDUM NO. 1 — June 25, 1975

and M&C Div. Browning Ferris Industries, Inc. X + P.S. 1st Item #6-5 is wrong

The Contractor hereby offers to provide all necessary machinery, tools and apparatus and to do all the work and furnish all the materials called for by the Contract Documents of Site Preparation Contract "M-1" in the manner and time prescribed and according to the requirements of the Authority, including all the incidental work, and to complete the work within one hundred eighty calendar days. (See Specifications, Section 403.0).

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
6-1	3,800 3,020	Cubic yards of Rock Excavation including disposal, at M&C Div. of BF — 35 .01 Spinello — Per Cubic Yard	35	00	133,000	00
6-2 ✓	300	Cubic yards of Test Pits and Miscellaneous Excavation and refilling, at 15 10 Per Cubic Yard	15	00	4,500	00
6-3 ✓	100	Cubic yards of Earth Excavation Below Grade, at 25 20 Per Cubic Yard	18	00	1,800	00
6-4 ✓	1 TOKEN	Remove Existing Water Line Main Valve 6-Inches or Greater on Water Lines to be Abandoned, at Seven Hundred Dollars and No Cents Each	700	00	700	00
6-5 ✓	10 TOKEN	Remove Existing Service Gate or Meter in Sheet Boxes, on services to be abandoned, at One Hundred Fifty Dollars and No Cents Each	150	00	1,500	00
6-6	+ 2 TOKEN	Remove Existing Blow-Off and Plug Tee at Main, at Six Hundred Dollars and No Cents Each	600	00	600	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
7-1	~~12,000~~ 14160	Cubic Yards of Bank Gravel refill, as authorized by the Engineer, and for all trench refill except as otherwise directed by the Engineer, at				
			4	25		
				01		
		Per Cubic Yard	5	00	60,000	00
7-2	~~500~~ 405	Cubic Yards of Grading Size No. 67 Crushed Stone, (3/4-inch to No. 4) furnished and placed by the authority of the Engineer, at				
			8	50		
			8	00		
		Per Cubic Yard	12	00	6,000	00
8-1	~~300~~ 180	Linear feet of furnished and laying 2-Inch Temporary Bypass Pipe for Domestic Service, including temporary services, maintenance, fittings, valves, removal and all incidental work, at				
			3	50		
			4	00		
		Per Linear Foot	3	00	900	00
8-2	~~24,000~~ 24015	Linear feet of furnishing and laying 4-Inch Temporary Bypass Pipe for Domestic Service, including temporary services, maintenance, fittings, valves, removal and all incidental work, at				
			5	50		
			6	00		
		Per Linear Foot	5	00	120,000	00
8-3	~~21,000~~ 21,025	Linear feet of furnishing and laying 4-Inch Temporary Bypass Pipe for Fire Protection, including temporary services, maintenance, fittings, valves, removal and all incidental work, at				
			5	50		
			5	00		
		Per Linear Foot	4	00	84,000	00
8-4	~~450~~ 465	Linear feet of furnishing and laying 6-Inch Temporary Bypass Pipe for Fire or Domestic Service, including temporary services, maintenance, fittings, valves, removal and all incidental work, at				
			8	00		
			9	00		
		Per Linear Foot	7	00	3,150	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
8-5	~~93~~ 95	Furnish and install Temporary Fire Hydrants, complete, including tee branch, temporary service pipe, valves, fittings, maintenance, removal and all incidental work, at				
			125 350			
		Each	250	00	23,250	00
8-6 ✓	1	Furnish and set 12-inch x 4-inch or 12-inch x 6-inch Tapping Sleeve and Valve, complete, including excavation, temporary bypass line and all connections, removal, refilling, and all incidental work, at				
		~~One Thousand Five Hundred~~	~~1500~~			
		One Thousand Five Hundred Dollars and No Cents				
	TOKEN	Each	1,500	00	1,500	00
8-7	~~3,700~~ 3625	Cleaning and Cement Lining 8-Inch Cast Iron Water Pipe, complete, including excavation, refilling and all incidental work, at				
			13 14	00		
		Per Linear Foot	12	00	44,400	00
8-8	~~10,500~~ 10382	Cleaning and Cement Lining 12-Inch Cast Iron Water Pipe, complete, including excavation, refilling and all incidental work, at				
			16 18	20		
		Per Linear Foot	14	00	147,000	00
8-9	400 390	Cleaning and Cement Lining 20-Inch Cast Iron Water Pipe, complete, including excavation, refilling and all incidental work, at				
			22 22	00		
		Per Linear Foot	18	00	7,200	00
8-10 ✓	15	Obstruction in Pipes To Be Cleaned and Cement Lined, complete, including excavation, removal and connections, refilling, and all incidental work, at				
			~~1500~~			
		One thousand Dollars and No Cents				
	TOKEN	Each	1,000	00	15,000	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
8-11 ✓	5	Plugged Service, complete, including excavations, removal and connections, refilling and all incidental work, at Two Hundred Fifty Dollars and No Cents	~~250~~			
	TOKEN	Each	250	00	1,250	00
8-12 ✓	10	Tap Hole in Existing Service, complete, including excavation, tap connections, refilling and all incidental work, at Three Hundred Dollars and No Cents	~~300~~			
	TOKEN	Each	300	00	3,000	00
8-13 ✓	1	Unscheduled Remobilization and Demobilization for additional work or work ordered out of sequence, at One Thousand Five Hundred Dollars and No Cents	~~1,500~~			
	TOKEN	Each	1,500	00	1,500	00
9-1	~~400~~ 305	Linear feet of trench and furnishing laying or furnishing and relaying of existing water pipe with 3-Inch or 4-Inch C.I. or D.I.C.L. Water Pipe, including all connections, refilling and all incidental work, at	27 40	50		H
		Per Linear Foot	18	00	7,200	00
9-2	~~400~~ 410	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 6-Inch D.I.C.L. Water Pipe, including all connections, refilling and all incidental work, at	30 50			H
		Per Linear Foot	20	00	8,000	00
9-3	~~4,700~~ 4600	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 8-Inch D.I.C.L. Water Pipe, including all connections, refilling and all incidental work, at	42 70	50		H
		Per Linear Foot	30	00	141,000	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
9-4	~~1,000~~ 820	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 12-inch D.I.C.L. Water Pipe, including all connections, refilling and all incidental work, at	50 80			
		Per Linear Foot	40	00	40,000	00
9-5	10	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 20-Inch D.I.C.L. Water Pipe, including all connections, refilling and all incidental work, at				
	TOKEN	Forty Dollars and No Cents	~~40~~ 60	00	~~400~~ 600	00
		Per Linear Foot				
9-6	~~73,000~~ 75,500	Pounds of Additional Fittings, furnished and set, including all incidental work, at	120 101			
		Per Pound	1	00	73,000	00
9-7	~~15~~ 8	Furnish and set 3-Inch or 4-Inch Gate, complete in place, including box, excavation, removal of existing gate or pipe section, refilling and all incidental work, at	300 500			
		Each	600	00	9,000	00
9-8	~~40~~ 36	Furnish and set 6-Inch Gate, complete in place, including box, excavation, removal of existing valve or pipe section, refilling and all incidental work, at	600 1000			
		Each	700	00	28,000	00
9-9	~~50~~ 45	Furnish and set 8-Inch Gate, complete in place, including box, excavation, removal of existing valve or pipe section, refilling and all incidental work, at	800 1300			
		Each	1,000	00	50,000	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
9-10	~~75~~ 71	Furnish and set 12-Inch Gate, complete in place, including box, excavation, removal of existing valve or pipe section, refilling and all incidental work, at Each	1000 1600 1,200	00	90,000	00
9-11		Not Applicable Each				
9-12	~~8,000~~ 9332	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 3/4-Inch Copper Service Pipe, including all connections, refilling and all incidental work, at Per Linear Foot	16 21 12	50 00	96,000	00
9-13	~~600~~ 679	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 1-Inch Copper Service Pipe, including all connections, refilling and all incidental work, at Per Linear Foot	17 25 14	50 00	8,400	00
9-14	~~500~~ 249	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 1-1/2-Inch Copper Service Pipe, including all connections, refilling and all incidental work, at Per Linear Foot	17 27 18	75 00	9,000	00
9-15	~~200~~ 69	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 2-Inch Copper Service Pipe, including all connections, refilling and all incidental work, at Per Linear Foot	18 30 20	75 00	4,000	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
9-16	~~300~~ 309	Furnish and set 3/4-Inch Corporation Stop, complete in place, including all drilling and tapping of the main, and all incidental work, at Each	65 70 65	00	19,500	00
9-17	~~11~~ 18	Furnish and set 1-Inch Corporation Stop, complete in place, including all drilling and tapping of the main, and all incidental work, at Each	70 75 80	00	880	00
9-18	~~20~~ 6	Furnish and set 1-1/2-Inch Corporation Stop, complete in place, including all drilling and tapping of the main, box, frame and cover, all all incidental work, at Each	155 100 100	00	2,000	00
9-19	~~11~~ 4	Furnish and set 1-1/2-Inch Corporation Stop with 1-1/2" x 2" Adapter, complete in place, including all drilling and tapping of the main, box, frame and cover, and all incidental work, at Each	200 200 170	00	1,870	00
9-20	~~300~~ 309	Furnish and set 3/4-Inch Curb Stop, complete in place, including all connections to services and all incidental work, at Each	75 120 110	00	33,000	00
9-21	~~11~~ 18	Furnish and set 1-Inch Curb Stop, complete in place, including all connections to services and all incidental work, at Each	80 150 130	00	1,430	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
9-22 ✓	1	Install New Water Meter, including all connections, additional hardware and all incidental work, at Fifty Dollars and No Cents				
	TOKEN	Each	50	00	50	00
9-23	~~25~~ 24	Hydrant, furnished and set, complete in place, including all necessary connections, removal of existing hydrant, if any, tie rods, refilling and all incidental work, at 800 1000				
		Each	750	00	18,750	00
9-24 ✓	1	Hydrant Removed, and not replaced, including all necessary excavation, refilling and all incidental work, at Six Hundred Dollars and No Cents				
	TOKEN	Each	600	00	600	00
9-25 ✓	4	Adjust Valve or Corporation Stop Box to Grade including cleaning and excavation and backfill, at One Hundred Dollars and No Cents				
	TOKEN	Each	100	00	400	00
9-26 ✓	4	Clean Valve or Corporation Stop Box, at Fifty Dollars and No Cents				
	TOKEN		50	00	200	00
9-27 ✓	2	Furnish and install Watertight Plug, complete in place, including excavation and backbill, at 160 600				
		Each	250	00	500	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
10-1 ✓	100	Cubic yards of Cement Concrete Masonry for pipe restraint, encasement, or for any other purpose as directed, including reinforcing steel and all incidental work, at Per Cubic Yard	65 40 40	00	4,000	00
11-1	~~11,000~~ 10550	Square yards of 3-inch Temporary Bituminous Pavement, at Per Square Yard	8 50 .01 7	00	77,000	00
11-2 ✓	150	Tons of 3-Inch Cold Patch Paving, at Per Ton	50 40 30	00	4,500	00
11-3 ✓	5 TOKEN	Remove and Reset Existing Brick Sidewalk or Gutter, complete in place, at Sixty Dollars and No Cents Per Square Yard	60	00	300	00
11-4 ✓	5 TOKEN	Remove and Replace Mortared Brick Sidewalk or Gutter, at Twenty Dollars and No Cents Per Cubic Foot	20	00	100	00
12-1 ✓	1	Engineer's Field Office, complete, including equipment, utilities and services, maintenance and fencing, at Lump Sum	15000 10,000 5,000		5,000	00

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ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
13-1	2,300	Hours of Special Duty Police supplied by the Contractor, at Nine Dollars Per Hour	9	00	20,700	00
13-2	100	Hours of Special Duty Police Sergeant supplied by the Contractor, at Eight Dollars and Twenty-Five Cents Per Hour	8	25	825	00
		TOTAL - SITE PREPARATION CONTRACT "M-1"			~~1,591,145.00~~ 1,584,898.00 Low 1,416,055	00

1,595

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NOTE 1. In accordance with common practice, where a quantity is labelled "Token", use of the item is either not anticipated or no estimate of quantity can be made, but the item is included to establish a price under this Contract, usually in the event such work is required owing to unforeseen field conditions.

NOTE 2. Payment under those items for which quantities are shown in the above Proposal shall constitute full payment for all of the work required under this Contract as indicated on the Drawings and delineated in the Specifications.

NOTE 3. In case of a discrepancy between the unit prices written in words and unit prices written in figures, the written words shall govern.

NOTE 4. If water services are replaced by "pulling through" new copper services, the quantities of Rock Excavation, Bank Gravel and 3" Temporary Paving will be less than those shown on this Bid Proposal.

Kane Simonian, B.R.A.

SECOND ADVERTISING — ENGINEER'S ESTIMATE — REVISED 9/12/75 by ADDENDUM No. 1

The Contractor hereby offers to provide all necessary machinery, tools and apparatus and to do all the work and furnish all the materials called for by the Contract Documents of Site Preparation Contract "M-1" in the manner and time prescribed and according to the requirements of the Authority, including all the incidental work, and to complete the work within one hundred eighty calendar days. (See Specifications, Section 403.0)

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
6-1	250 TOKEN	Cubic yards of Rock Excavation, including disposal, at Forty Dollars and No Cents Per Cubic Yard	40	00	10,000	00
6-2	300 TOKEN	Cubic yards of Test Pits and Miscellaneous Excavation including refilling and 3" Bituminous Pavement, at Fifteen Dollars and No Cents Per Cubic Yard	15	00	4,500	00
6-3	200 TOKEN	Cubic yards of Earth Excavation Below Grade, at Twenty-two Dollars and No Cents Per Cubic Yard	22	00	4,400	00
6-4	20	Remove Existing Water Line Main Valve 6 Inches or Greater on Water Lines to Remain in Service, at Four Hundred Dollars and No Cents Each	400	00	8,000	00
6-5	1 TOKEN	Remove Existing Water Line Main Valve 6 inches or Greater on Water Lines to be Abandoned, at Five Hundred Dollars and No Cents Each	500	00	500	00
6-6	10 TOKEN	Remove Existing Service Gate or Meter in Street Boxes, on services to be abandoned, at One Hundred Fifty Dollars and No Cents Each	150	00	1500	00
6-7	1 TOKEN	Remove Existing Blow-Off and Plug Tee at Main, at Six Hundred Dollars and No Cents Each	600	00	600	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
7-1	6,000	Cubic Yards of Bank Gravel refill, as required by the Plans and directed by the Engineer, and for all trench refill where required except at new services or relay of services 4 inches in diameter or less, at Per Cubic Yard	5	00	30,000	00
7-2	500	Cubic Yards of Grading Size No. 67 Crushed Stone, (3/4-inch to No. 4) furnished and placed by the authority of the Engineer, at Per Cubic Yard	12	00	6,000	00
8-1	300	Linear feet of furnishing and laying 2-inch Temporary Bypass Pipe for Domestic Service, including temporary services, maintenance, fittings, valves, removal, 3" Bituminous Pavement at Depressions and all incidental work, at Per Linear Foot	3	20	960	00
8-2	24,000	Linear feet of furnishing and laying 4-Inch Temporary Bypass Pipe for Domestic Service, including temporary services, maintenance, fittings, valves, removal, 3" Bituminous Pavement at Depressions and all incidental work, at Per Linear Foot	5	20	124,800	00
8-3	21,000	Linear feet of furnishing and laying 4-Inch Temporary Bypass Pipe for Fire Protection, including temporary services, maintenance, fittings, valves, removal, 3" Bituminous Pavement at Depressions, and all incidental work, at Per Linear Foot	4	20	88,200	00
8-4	450	Linear feet of furnishing and laying 6-Inch Temporary Bypass Pipe for Fire or Domestic Service, including temporary services, maintenance, fittings, valves, removal, 3" Bituminous Pavement at Depressions, and all incidental work, at Per Linear Foot	7	20	3,240	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
8-5	93	Furnish and install Temporary Fire Hydrants, complete, including tee branch, temporary service pipe, valves, fittings, maintenance, removal and all incidental work, at Each	250	00	23,250	00
8-6	1 TOKEN	Furnish and set 12-inch x 4-inch or 12-inch x 6-inch Tapping Sleeve and Valve, complete, including excavation, temporary bypass line and all connections, removal, refilling, 3-inch bituminous pavement, and all incidental work, at One Thousand Five Hundred Dollars and No Cents Each	1,500	00	1,500	00
8-7	3,700	Cleaning and Cement Lining 8-Inch Cast Iron Water Pipe, complete, including excavation, refilling, 3" Bituminous Pavement, and all incidental work, at Per Linear Foot	12	00	44,400	00
8-8	10,500	Cleaning and Cement Lining 12-Inch Cast Iron Water Pipe, complete, including excavation, refilling, 3" Bituminous Pavement, and all incidental work, at Per Linear Foot	14	00	147,000	00
8-9	400	Cleaning and Cement Lining 20-Inch Cast Iron Water Pipe, complete, including excavation, refilling, 3" Bituminous Pavement, and all incidental work, at Per Linear Foot	18	00	7,200	00
8-10	15 TOKEN	Obstruction in Pipes To Be Cleaned and Cement Lined, complete, including excavation, removal and connections, refilling, 3-inch bituminous pavement and all incidental work, at One thousand Dollars and No Cents Each	1,000	00	15,000	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
8-11	5 TOKEN	Plugged Service, complete, including excavations, removal and connections, refilling, 3" Bituminous Pavement, and all incidental work, at Two Hundred Fifty Dollars and No Cents Each	250	00	1,250	00
8-12	40 TOKEN	Tap Hole in Existing Service, complete, including excavation, tap connections, refilling, 3" Bituminous Pavement, and all incidental work, at Three Hundred Dollars and No Cents Each	300	00	12,000	00
8-13	1 TOKEN	Unscheduled Remobilization and Demobilization for additional work or work ordered out of sequence, at One Thousand Five Hundred Dollars and No Cents Each	1,500	00	1,500	00
9-1	400	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 3-Inch or 4-Inch C.I.C.L. or D.I.C.L. Water Pipe, including all connections. 3" Bituminous Pavement, Sand Bedding, Bank Gravel Refill, and all incidental work, at Per Linear Foot	35	00	14,000	00
9-2	450	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 6-Inch D.I.C.L. Water Pipe, including all connections, refilling, 3-inch bituminous pavement and all incidenral work, at Per Linear Foot	40	00	18,000	00
9-3	4,750	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 8-Inch D.I.C.L. Water Pipe, including all connections, refilling, 3-inch bituminous pavement and all incidental work, at Per Linear Foot	45	00	213,750	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
9-4	1,100	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 12-inch D.I.C.L. Water Pipe, including all connections, refilling, 3-inch bituminous pavement and all incidental work, at Per Linear Foot	55	00	60,500	00
9-5	10 TOKEN	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 20-Inch D.I.C.L. Water Pipe, including all connections, refilling, 3-inch bituminous pavement and all incidental work, at Sixty-five Dollars and No Cents Per Linear Foot	65	00	650	00
9-6	73,000	Pounds of Additional Fittings, furnished and set, including all incidental work, at One Dollar and No Cents Per Pound	1	00	73,000	00
9-7	15	Furnish and set 3-Inch or 4-Inch Gate, complete in place, including box, excavation, removal of existing gate or pipe section, refilling, 3" Bituminous Pavement, and all incidental work, at Each	600	00	9,000	00
9-8	40	Furnish and set 6-Inch Gate, complete in place, including box, excavation, removal of existing valve or pipe section, refilling, 3" Bituminous Pavement, and all incidental work, at Each	700	00	28,000	00
9-9	50	Furnish and set 8-Inch Gate, complete in place, including box, excavation, removal of existing valve or pipe section, refilling, 3" Bituminous Pavement, and all incidental work, at Each	1,000	00	50,000	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
9-10	75	Furnish and set 12-Inch Gate, complete in place, including box, excavation, removal of existing valve or pipe section, refilling, 3-inch bituminous pavement, and all incidental work, at Each	1,200	00	90,000	00
9-11		Not Applicable Each	NOT APPLICABLE			
9-12	8,000	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 3/4-Inch Copper Service Pipe, including all connections, bank gravel refill, sand bedding, 3-inch bituminous pavement, and all incidental work, at Per Linear Foot	25	50	204,000	00
9-13	600	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 1-Inch Copper Service Pipe, including all connections, bank gravel refill, sand bedding, 3-inch bituminous pavement, and all incidental work, at Per Linear Foot	27	50	16,500	00
9-14	500	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 1-1/2-Inch Copper Service Pipe, including all connections, bank gravel refill, sand bedding, 3-inch bituminous pavement, and all incidental work, at Per Linear Foot	31	50	15,750	00
9-15	200	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 2-Inch Copper Service Pipe, including all connections, bank gravel refill, sand bedding, 3" bituminous pavement, and all incidental work, at Per Linear Foot	33	50	6,700	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
9	300	Furnish and set 3/4-Inch Corporation Stop, complete in place, including all drilling and tapping of the main, and all incidental work, at Each	65	00	19,500	00
9-17	11	Furnish and set 1-Inch Corporation Stop, complete in place, including all drilling and tapping of the main, and all incidental work, at Each	80	00	880	00
9-18	20	Furnish and set 1-1/2-Inch Corporation Stop, complete in place, including all drilling and tapping of the main, box, frame and cover, and all incidental work, at Each	100	00	2,000	00
9-19	11	Furnish and set 1-1/2-Inch Corporation Stop with 1-1/2" x 2" Adapter, complete in place, including all drilling and tapping of the main, box, frame and cover, and all incidental work, at Each	180	00	1,980	00
9-20	300	Furnish and set 3/4-Inch Curb Stop, complete in place, including all connections to services and all incidental work, at Each	100	00	30,000	00
9-21	11	Furnish and set 1-Inch Curb Stop, complete in place, including all connections to services and all incidental work, at Each	120	00	1,320	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
9	1	Install New Water Meter, including all connections, additional hardware and all incidental work, at Fifty Dollars and No Cents				
	TOKEN	Each	50	00	50	00
9-23	25	Hydrant, furnished and set, complete in place, including all necessary connections, removal of existing hydrant, if any, tie rods, refilling, crushed stone for drainage, 3-inch bituminous pavement, and all incidental work, at				
		Each	750	00	18,750	00
9-24	1	Hydrant Removed, and not replaced, including all necessary excavation, refilling 3-inch bituminous pavement and all incidental work, at Six Hundred Dollars and No Cents				
	TOKEN	Each	600	00	600	00
9-25	4	Adjust Valve or Corporation Stop Box to Grade including cleaning, excavation, refilling, 3-inch bituminous pavement, and all incidental work, at One Hundred Dollars and No Cents				
	TOKEN	Each	100	00	400	00
9-26	4	Clean Valve or Corporation Stop Box, at Fifty Dollars and No Cents				
	TOKEN		50	00	200	00
9-27	2	Furnish and install Watertight Plug, complete in place, including excavation, refilling, 3-inch bituminous pavement, and all incidental work, at				
		Each	250	00	500	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
10-1	100	Cubic yards of Cement Concrete Masonry for pipe restraint, encasement, or for any other purpose as directed, including reinforcing steel and all incidental work, at Per Cubic Yard	45	00	4,500	00
11-1	1,000 TOKEN	Square yards of 3-inch Temporary Bituminous Pavement, for unanticipated miscellaneous patching where directed by the Engineer, at Eight Dollars and No Cents Per Square Yard	8	00	8,000	00
11-2	250 TOKEN	Tons of 3-Inch Cold Patch Paving, at Forty Dollars and No Cents Per Ton	40	00	10,000	00
11-3	5 TOKEN	Remove and Reset Existing Brick Sidewalk or Gutter, complete in place, at Sixty Dollars and No Cents Per Square Yard	60	00	300	00
11-4	5 TOKEN	Remove and Replace Mortared Brick Sidewalk or Gutter, at Twenty Dollars and No Cents Per Cubic Foot	20	00	100	00
12-1	1	Engineer's Field Office, complete, including equipment, utilities and services, maintenance and fencing, at Lump Sum	5,000	00	5,000	00

SECOND ADVERTISING REVISED SEPTEMBER 12, 1975 by ADDENDUM NO. 1

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
13-1	2,300	Hours of Special Duty Police supplied by the Contractor, at Nine Dollars and No Cents Per Hour	9	00	20,700	00
13-2	100	Hours of Special Duty Police Sergeant supplied by the Contractor, at Eight Dollars and Twenty-Five Cents Per Hour	8	25	825	00
		TOTAL - SITE PREPARATION CONTRACT "M-1"			1,461,255	00

Note 1. In accordance with common practice, where a quantity is labelled "Token", use of the item is either not anticipated or no estimate of quantity can be made, but the item is included to establish a price under this Contract, usually in the event such work is required owing to unforeseen field conditions. The unit prices of these items under this contract are established ("fixed"); the unit prices of certain other items are also "fixed".

Note 2. Payment under those items for which quantities are shown in the above Proposal shall constitute full payment for all of the work required under this Contract as indicated on the Drawings and delineated in the Specifications.

Note 3. In case of a discrepancy between the unit prices written in words and unit prices written in figures, the written words shall govern.

BID FOR SITE PREPARATION CONTRACT "M-1"

GENERAL CONTRACTOR

TO THE BOSTON REDEVELOPMENT AUTHORITY

1.0 The undersigned having familiarized (Himself) (Themselves) (Itself) with the existing conditions of the Project Area affecting the cost of the work and with the Contract Documents (which includes Invitation for Bids, Instructions to Bidders, the form of Bid, the form of the Bid Bond, form of Contract (or agreement), form of Non-Collusion Affidavit, Addenda (if any), General Conditions, Part 1 & II, Special Conditions, Technical Specifications, Drawings (as listed in the schedule of drawings), and form of Surety Bond or Bonds) on file in the office of the Boston Redevelopment Authority hereby proposes to furnish all supervision, technical personnel, labor, materials, machinery, tools, appurtenances, equipment and services, including utility and transportation services required to construct and complete Site Preparation Contract "M-1" at the South End Urban Renewal Project, Project Mass. R-56, all in accordance with above listed documents.

2.0 The undersigned agrees that he will within ten (10) days after presentation thereof by the Authority execute the Contract and furnish a Performance Bond and also a Labor and Materials or Payment Bond, each of a surety company listed in the latest issue of the U.S. Treasury Circular 570 and the penal sum shall be within the maximum specified for each such company in said Circular 570, each in the sum of one hundred percent (100%) of the Contract price, the premiums for which are to be paid by the Contractor and are included in the Contract price.

3.0 The total bid itemized in the Proposal (pages 8a through 8j) _____ dollars ($ _____).

PROPOSAL - BIDDER'S FORM

The Contractor hereby offers to provide all necessary machinery, tools and apparatus and to do all the work and furnish all the materials called for by the Contract Documents of Site Preparation Contract "M-1" in the manner and time prescribed and according to the requirements of the Authority, including all the incidental work, and to complete the work within one hundred eighty calendar days. (See Specifications, Section 403.0)

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
6-1	3,800	Cubic yards of Rock Excavation, including disposal, at Per Cubic Yard				
6-2	300	Cubic yards of Test Pits and Miscellaneous Excavation and refilling, at Per Cubic Yard				
6-3	100	Cubic yards of Earth Excavation Below Grade, at Per Cubic Yard				
6-4	12 TOKEN	Remove Existing Water Line Main Valve 6 Inches or Greater in Water Lines to Remain in Service, at Four Hundred Dollars and No Cents Each	400	00	4,800	00
6-5	1 TOKEN	Remove Existing Water Line Main Valve 6 inches or Greater on Water Lines to be Abandoned, at Seven Hundred Dollars and No Cents Each	700	00	700	00
6-6	10 TOKEN	Remove Existing Service Gate or Meter in Street Boxes, on services to be abandoned, at One Hundred Fifty Dollars and No Cents Each	150	00	1500	00
6-7	1 TOKEN	Remove Existing Blow-Off and Plug Tee at Main, at Six Hundred Dollars and No Cents Each	600	00	600	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE		AMOUNT	
			Dollars	Cents	Dollars	Cents
7-1	12,000	Cubic Yards of Bank Gravel refill, as authorized by the Engineer, and for all trench refill except as otherwise directed by the Engineer, at _____ Per Cubic Yard				
7-2	500	Cubic Yards of Grading Size No. 67 Crushed Stone, (3/4-inch to No. 4) furnished and placed by the authority of the Engineer, at _____ Per Cubic Yard				
8-1	300	Linear feet of furnished and laying 2-Inch Temporary Bypass Pipe for Domestic Service, including temporary services, maintenance, fittings, valves, removal and all incidental work, at _____ Per Linear Foot				
8-2	24,000	Linear feet of furnishing and laying 4-Inch Temporary Bypass Pipe for Domestic Service, including temporary services, maintenance, fittings, valves, removal and all incidental work, at _____ Per Linear Foot				
8-3	21,000	Linear feet of furnishing and laying 4-Inch Temporary Bypass Pipe for Fire Protection, including temporary services, maintenance, fittings, valves, removal and all incidental work, at _____ Per Linear Foot				
8-4	450	Linear feet of furnishing and laying 6-Inch Temporary Bypass Pipe for Fire or Domestic Service, including temporary services, maintenance, fittings, valves, removal and all incidental work, at _____ Per Linear Foot				

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
8-5	93	Furnish and install Temporary Fire Hydrants, complete, including tee branch, temporary service pipe, valves, fittings, maintenance, removal and all incidental work, at Each				
8-6	1 TOKEN	Furnish and set 12-inch x 4-inch or 12-inch x 6-inch Tapping Sleeve and Valve, complete, including excavation, temporary bypass line and all connections, removal, refilling, and all incidental work, at One Thousand Five Hundred Dollars and No Cents Each	1,500	00	1,500	00
8-7	3,700	Cleaning and Cement Lining 8-Inch Cast Iron Water Pipe, complete, including excavation, refilling and all incidental work, at Per Linear Foot				
8-8	10,500	Cleaning and Cement Lining 12-Inch Cast Iron Water Pipe, complete, including excavation, refilling and all incidental work, at Per Linear Foot				
8-9	400	Cleaning and Cement Lining 20-Inch Cast Iron Water Pipe, complete, including excavation, refilling and all incidental work, at Per Linear Foot				
8-10	15 TOKEN	Obstruction in Pipes To Be Cleaned and Cement Lined, complete, including excavation, removal and connections, refilling, and all incidental work, at One thousand Dollars and No Cents Each	1,000	00	15,000	00

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
8-11	5	Plugged Service, complete, including excavations, removal and connections, refilling and all incidental work, at Two Hundred Fifty Dollars and No Cents				
	TOKEN	Each	250	00	1,250	00
8-12	40	Tap Hole in Existing Service, complete, including excavation, tap connections, refilling and all incidental work, at Three Hundred Dollars and No Cents				
	TOKEN	Each	300	00	12,000	00
8-13	1	Unscheduled Remobilization and Demobilization for additional work or work ordered out of sequence, at One Thousand Five Hundred Dollars and No Cents				
	TOKEN	Each	1,500	00	1,500	00
9-1	400	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 3-Inch or 4-Inch C.I. or D.I.C.L. Water Pipe, including all connections, refilling and all incidental work, at Per Linear Foot				
9-2	400	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 6-Inch D.I.C.L. Water Pipe, including all connections, refilling and all incidental work, at Per Linear Foot				
9-3	4,700	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 8-Inch D.I.C.L. Water Pipe, including all connections, refilling and all incidental work, at Per Linear Foot				

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE		AMOUNT	
			Dollars	Cents	Dollars	Cents
9-4	1,000	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 12-inch D.I.C.L. Water Pipe, including all connections, refilling and all incidental work, at Per Linear Foot				
9-5	10 TOKEN	Linear feet of trench and furnishing and laying or furnishing and relaying of existing water pipe with 20-Inch D.I.C.L. Water Pipe, including all connections, refilling and all incidental work, at Forty Dollars and No Cents Per Linear Foot	40	00	400	00
9-6	73,000	Pounds of Additional Fittings, furnished and set, including all incidental work, at Per Pound				
9-7	15	Furnish and set 3-Inch or 4-Inch Gate, complete in place, including box, excavation, removal of existing gate or pipe section, refilling and all incidental work, at Each				
9-8	40	Furnish and set 6-Inch Gate, complete in place, including box, excavation, removal of existing valve or pipe section, refilling and all incidental work, at Each				
9-9	50	Furnish and set 8-Inch Gate, complete in place, including box, excavation, removal of existing valve or pipe section, refilling and all incidental work, at Each				

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
9-10	75	Furnish and set 12-Inch Gate, complete in place, including box, excavation, removal of existing valve or pipe section, refilling and all incidental work, at Each				
9-11		Not Applicable Each	NOT APPLICABLE			
9-12	8,000	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 3/4-Inch Copper Service Pipe, including all connections, refilling and all incidental work, at Per Linear Foot				
9-13	600	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 1-Inch Copper Service Pipe, including all connections, refilling and all incidental work, at Per Linear Foot				
9-14	500	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 1-1/2-Inch Copper Service Pipe, including all connections, refilling and all incidental work, at Per Linear Foot				
9-15	200	Linear feet of trench and furnishing and laying or furnishing and relaying existing service pipe with 2-Inch Copper Service Pipe, including all connections, refilling and all incidental work, at Per Linear Foot				

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
9-16	300	Furnish and set 3/4-Inch Corporation Stop, complete in place, including all drilling and tapping of the main, and all incidental work, at _____ Each				
9-17	11	Furnish and set 1-Inch Corporation Stop, complete in place, including all drilling and tapping of the main, and all incidental work, at _____ Each				
9-18	20	Furnish and set 1-1/2-Inch Corporation Stop, complete in place, including all drilling and tapping of the main, box, frame and cover, and all incidental work, at _____ Each				
9-19	11	Furnish and set 1-1/2-Inch Corporation Stop with 1-1/2" x 2" Adapter, complete in place, including all drilling and tapping of the main, box, frame and cover, and all incidental work, at _____ Each				
9-20	300	Furnish and set 3/4-Inch Curb Stop, complete in place, including all connections to services and all incidental work, at _____ Each				
9-21	11	Furnish and set 1-Inch Curb Stop, complete in place, including all connections to services and all incidental work, at _____ Each				

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
9-22	1 TOKEN	Install New Water Meter, including all connections, additional hardware and all incidental work, at Fifty Dollars and No Cents Each	50	00	50	00
9-23	25	Hydrant, furnished and set, complete in place, including all necessary connections, removal of existing hydrant, if any, tie rods, refilling and all incidental work, at Each				
9-24	1 TOKEN	Hydrant Removed, and not replaced, including all necessary excavation, refilling and all incidental work, at Six Hundred Dollars and No Cents Each	600	00	600	00
9-25	4 TOKEN	Adjust Valve or Corporation Stop Box to Grade including cleaning and excavation and backfill, at One Hundred Dollars and No Cents Each	100	00	400	00
9-26	4 TOKEN	Clean Valve or Corporation Stop Box, at Fifty Dollars and No Cents	50	00	200	00
9-27	2	Furnish and install Watertight Plug, complete in place, including excavation and backfill, at Each				

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
10-1	100	Cubic yards of Cement Concrete Masonry for pipe restraint, encasement, or for any other purpose as directed, including reinforcing steel and all incidental work, at Per Cubic Yard				
11-1	11,000	Square yards of 3-inch Temporary Bituminous Pavement, at Per Square Yard				
11-2	400	Tons of 3-Inch Cold Patch Paving, at Per Ton				
11-3	5 TOKEN	Remove and Reset Existing Brick Sidewalk or Gutter, complete in place, at Sixty Dollars and No Cents Per Square Yard	60	00	300	00
11-4	5 TOKEN	Remove and Replace Mortared Brick Sidewalk or Gutter, at Twenty Dollars and No Cents Per Cubic Foot	20	00	100	00
12-1	1	Engineer's Field Office, complete, including equipment, utilities and services, maintenance and fencing, at Lump Sum				

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE IN WORDS	UNIT PRICE Dollars	UNIT PRICE Cents	AMOUNT Dollars	AMOUNT Cents
13-1	2,300	Hours of Special Duty Police supplied by the Contractor, at Nine Dollars Per Hour	9	00	20,700	00
13-2	100	Hours of Special Duty Police Sergeant supplied by the Contractor, at Eight Dollars and Twenty-Five Cents Per Hour	8	25	825	00
		TOTAL - SITE PREPARATION CONTRACT "M-1"				

NOTE 1. In accordance with common practice, where a quantity is labelled "Token", use of the item is either not anticipated or no estimate of quantity can be made, but the item is included to establish a price under this Contract, usually in the event such work is required owing to unforeseen field conditions.

NOTE 2. Payment under those items for which quantities are shown in the above Proposal shall constitute full payment for all of the work required under this Contract as indicated on the Drawings and delineated in the Specifications.

NOTE 3. In case of a discrepancy between the unit prices written in words and unit prices written in figures, the written words shall govern.

NOTE 4. If water services are replaced by "pulling through" new copper services, the quantities of Rock Excavation, Bank Gravel and 3" Temporary Paving will be less than those shown on this Bid Proposal.

4.0 Attached hereto is an affidavit in proof that the undersigned has not colluded with any person in respect to this Bid or any other Bid or the submitting of Bids for the Contract for which this Bid is submitted. Also attached is a statement of Bidder's Qualifications.

5.0 The Bidder is prepared to submit a financial statement upon request.

6.0 In submitting this Bid, the Bidder understands that the right is reserved by the Authority to reject any and all Bids.

7.0 The undersigned hereby certified that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work.

Date_____19_____ _____
(Name of Bidder)

Official Address By_____

_____ Title_____

_____

Note: If the Bidder is a corporation, indicate state of incorporation under signature, and affix corporate seal; if a partnership, give full names and residential addresses of all partners and if an individual, give residential address if different from business address.

CERTIFICATION OF NONSEGREGATED FACILITIES

The Bidder certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The bidder certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he will not permit his employees to perform their services at any location under his control where segregated facilities are maintained. The bidder agrees that a breach of this certification will be a violation of the Equal Opportunity clause in any contract resulting from acceptance of this bid. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin, because of habit, local custom, or otherwise. The bidder agrees that (except where he has obtained identical certification from proposed subcontractors for specific time periods) he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity clause, and that he will retain such certifications in his files.

Note: The penalty for making false statements in offers is prescribed in 18 U.S.C. Section 1001.

Date_____, 19_____. _____
(Name of Bidder)

Official Address (including ZIP code): By_____

_____ _____

_____

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

State of .....)
)ss.
County of .....)

_____, being first duly sworn deposes and says that:

1.0 He is (owner, partner, officer, representative, or agent) of _____, the Bidder that has submitted the attached Bid:

2.0 He is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;

3.0 Such Bid is genuine and is not a collusive or sham Bid;

4.0 Neither the said Bidder nor any of the officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any other Bidder or to secure through any collusion conspiracy, connivance or unlawful agreement any advantage against the Boston Redevelopment Authority or any person interested in the proposed Contract; and

5.0 The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Signed) _____

_____
Title

Subscribed and sworn to before me

this _____ day of _____, 19___

_____

_____
Title

My commission expires _____

STATEMENT OF BIDDER'S QUALIFICATIONS

(Site Preparation Contractor)

All questions must be answered and the date given must be clear and comprehensive. This statement must be notarized. If necessary, questions may be answered on separate attached sheets. The Bidder may submit any additional information he desires.

1.0 Name of Bidder.

2.0 Permanent main office address.

2.a Treasury Number (Employer's Identification Number)

3.0 When organized.

4.0 If a corporation, where incorporated.

5.0 How many years have you been engaged in the contracting business under your present firm or trade name?

5.a Names and home addresses of the principal officers and their Social Security Numbers.

6.0 Contracts on hand. (Schedule these, showing gross amount of each contract and the approximate anticipated dates of completion. Underline those which are similar in magnitude, type of work and complexity covered by this project).

(Name and address of client and name of person supervising for client.)

7.0 General character of work performed by your company.

8.0 Have you ever failed to complete any work awarded to you?

If so, where and why?

9.0 Have you ever defaulted on a contract? If so, where and why?

10.0 List the more important contracts recently completed by you stating approximate cost for each, and the month and year completed. Underline those which involve magnitude, type of work and complexity similar to this project. (Give name and address of client and name of persons supervising for client.)

11.0 List your major equipment <u>available for this contract</u>.

12.0 Experience in construction work similar in importance, in the type of work and complexity covered by this project.

13.0 Background and experience of the principal members of your organization, including the officers.

14.0 Credit available: $_____

15.0 Give bank reference. (Include address)

16.0 Will you, upon request, fill out a detailed financial statement and furnish any other information that may be required by the Boston Redevelopment Authority?

17.0 The Undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the Boston Redevelopment Authority in verification of the recitals comprising this Statement of the Bidder's Qualifications.

Dated at _____ this _____ day of

_____, 19_____

_____
(Name of Bidder)

By _____

Title _____

State of _____)
)
County of _____)

_____ being duly sworn, deposes and says

that he is _____ of _____
(Name of Organization)

and that the answers to the foregoing questions and all statements therein contained are true and correct. Subscribed and sworn to before me this _____ day of _____, 19 ___

_____
Notary Public

My commission expires: _____

INSTRUCTIONS FOR FILLING OUT CONTRACTOR'S BIDDING CERTIFICATION

If you subscribe to the Boston Plan the following instructions apply:

All the trades to be used in the work shall be listed in paragraph 1 of the Contractors Bidders' Certification.

Listed below are the crafts that will continue to be covered by Part I of the Bid Conditions: Paragraph 2(a) of Contractors Bidders' Certification.

Boilermakers
Bricklayers
Carpenters
Elevator Constructors
Ironworkers
Painters
Plumbers
Sprinklerfitters

The following crafts shall be covered by Part II of the Bid Conditions: Paragraph 2(b) of Contractors Bidders' Certification.

Asbestos Workers
Cement Masons
Electrical Workers
Glaziers
Lathers
Operating Engineers
Pipefitters
Plasterers
Roofers
Sheetmetal Workers

Any trade or craft not listed above shall be listed in paragraph 2(b) of the Contractors Bidders' Certification.

If you do not subscribe to the Boston Plan but have your own Affirmative Action Plan than all crafts and trades will be listed under Paragraph 2(b).

CONTRACTORS BIDDERS' CERTIFICATION

_____ certifies that:
(Contractor)

1. it intends to use the following listed construction trades in the work under the contract _____
_____
_____;and

2. (a) as to those trades set forth in the preceding paragraph one hereof for which it is eligible under Part I of these Bid Conditions for participation in the Boston Plan, it will comply with the Boston Plan on all construction work (both federal and non-federal) in the Boston Area Construction Program area within the scope of coverage of that Plan, those trades being: _____
_____
_____ and/or

(b) as to those trades for which it is required by these Bid Conditions to comply with Part II of these Bid Conditions, it adopts the minimum minority manpower utilization goals and the specific affirmative action steps contained in said Part II, for all construction work (both federal and non-federal) in the Boston Area Construction Program area subject to these Bid Conditions, those trades being: _____
_____
_____;and

3. it will obtain from each of its subcontractors and submit to the contracting or administering agency prior to the award of any subcontract under this contract the subcontractor certification required by these Bid Conditions.

_____
(Signature of authorized representative of Contractor)

UNION ____ NON-UNION ____
PROJECT NUMBER: Mass R-_____
PROJECT NAME AND CONTRACT NUMBER: _____
CONTRACT AMOUNT: $_____
NAME AND ADDRESS OF CONTRACTOR: _____
_____
_____

PROJECT LOCATION: _____

SUBCONTRACTORS' CERTIFICATION

_____ certifies that:
(Subcontractor)

1. it intends to use the following listed construction trades in the work under the subcontract _____

_____

_____

2. (a) as to those trades set forth in the preceding paragraph one hereof for which it is eligible under Part I of these Bid Conditions for participation in the Boston Plan, it will comply with the Boston Plan on all construction work (both federal and non-federal) in the Boston Area Construction Program area subject to these Bid Conditions, those trades being _____

_____

_____ and/or

_____

(b) as to those trades for which it is required by these Bid Conditions to comply with Part II of these Bid Conditions, it adopts the minimum minority manpower utilization goals and the specific affirmative action steps contained in said Part II for all construction work (both federal and non-federal) in the Boston Area Construction Program area subject to these Bid Conditions, those trades being: _____

_____

_____ ; and

_____

3. it will obtain from each of its subcontractors prior to the award of any subcontract under this subcontract the subcontractor certification required by these Bid Conditions.

_____
(Signature of authorized representative of subcontractor)

In order to ensure that the said subcontractors' certification becomes a part of all subcontracts under the prime contract, no subcontract shall be executed until an authorized representative of the (agency) had determined, in writing, that the said certification has been incorporated in such subcontract, regardless of tier. Any subcontract executed without such written approval shall be void.

Union _____ Non-Union _____

Project Name and Number _____

Contract Amount: $ _____

Project Location _____

Name and Address of Prime Contractor _____

_____

_____

ADDITIONAL STATEMENT OF BIDDER'S QUALIFICATIONS

(Site Preparation Contractor)

The undersigned submits the following information relative to his qualifications and previous experience.

1. Number of years the bidder has been lining pipe by the proposed method:

_____

2. Available equipment, and men skilled in the operations required:*

_____

_____

3. Manufacturer and type of machine to be used in lining the pipe:*

_____

_____

4. Capacity of machine in feet per hour, for placing cement lining in pipe:

_____

_____

5. Method of cleaning pipe: _____

_____

_____

6. Admixtures to be used in sand-cement mortar: _____

_____

7. List jobs completed which are comparable to the work to be done under this contract. Give name of awarding authority, date, and individual familiar with the details of the work.*

Date	Awarding Authority	Pipe Size	Thickness of Lining	Cleaned & Lined Linear Feet

* Use additional sheets if necessary.

Bid Tabulation

Job Title: SITE PREP "M-1" SOUTH END PROJECT R-56 "M-1"

DATE: JULY 14 SHT. 1 OF 2

	ITEM NO.	DESCRIPTION OF ITEM	UNIT	QUANTITY	ENGINEER'S ESTIMATE UNIT PRICE	ENGINEER'S ESTIMATE TOTAL PRICE	SPINIELLO UNIT PRICE	SPINIELLO TOTAL PRICE	MTC UNIT PRICE	MTC TOTAL PRICE				
	6-1	ROCK EXCAVATION	C.Y.	3,800	35	133,000	0.01	38	35	133,000				
	6-2	TEST PITS & MISC. EXC.	C.Y.	300	15	4,500	10	3000	15	4,500				
	6-3	EARTH EXC. BELOW GRADE	C.Y.	100	18	1800	20	2000	25	2,500				
TOKEN	6-4	REM. EX. WATER MAIN VALVE > 6"	EA.	1	700	700	700	700	700	700				
TOKEN	6-5	REM. EX. GATE OR METER	EA.	10	150	1,500	150	1500	150	1500*				
TOKEN	6-6	REM. EX. BLOW-OFF & PLUG TEE	EA.	1	600	600	600	600	600	600				
	7-1	BANK GRAVEL	C.Y.	12,000	5	60,000	.01	120	4.25	51,000				
	7-2	CRUSHED STONE	C.Y.	500	12	6,000	8	4000	8.50	4,250				
	8-1	2" TEMP. BYPASS PIPE. DOM. SERV.	L.F.	300	3	900	4	1200	3.50	1,050				
	8-2	4" TEMP BYPASS PIPE. DOM. SERV	L.F.	24,000	5	120,000	6	144,000	5.50	132,000				
	8-3	4" TEMP. BYPASS PIPE. FIRE PROTEC	L.F.	21,000	4	84,000	5	105,000	5.50	115,500				
	8-4	6" TEMP. BYPASS PIPE. FIRE OR DOM SERV	LF.	450	7	3,150	9	4050	8	3,600				
	8-5	TEMP. FIRE HYDRANTS	EA.	93	250	23,250	350	32,550	125	11,625				
TOKEN	8-6	12"x4" OR 12"x6" TAP SLEEVE & V	EA.	1	1,500	1,500	1,500	1,500	1,500	1,500				
	8-7	CLEAN & CEMENT LIN. 8" CAST IRON WATER PIPE	LF	3,700	12	44,400	14	51,800	15	55,500				
	8-8	CLEAN & CEMENT LIN. 12" CAST IRON WATER PIPE	LF	19,500	14	147,000	18	189,000	16.20	170,100				
	8-9	CLEAN & CEMENT LIN. 20" CAST IRON WATER PIPE	L.F.	400	18	7,200	22	8,800	22	8,800				
TOKEN	8-10	OBSTR. PIPES. CLEAN & CEMENT	EA.	15	1,000	15,000	1,000	15,000	1,000	15,000				
TOKEN	8-11	PLUGGED SERVICE	EA.	5	250	1,250	250	1,250	250	1,250				
TOKEN	8-12	TAP HOLE EXIST. SERVICE	EA.	10	300	3,000	300	3,000	300	3,000				
TOKEN	8-13	UNSCHED REMOBIL. & DEMOBIL.	EA.	1	1,500	1,500	1,500	1,500	1,500	1,500				
	9-1	3" OR 4" C.I. OR D.I.C.L. PIPE	LF.	400	18	7,200	10	16,000	27.50	11,000				
	9-2	6" D.I.C.L. WATER PIPE	L.F.	400	20	8,000	50	20,000	30	12,000				
	9-3	8" D.I.C.L. WATER PIPE	L.F.	4,700	30	141,000	70	329,000	42.50	199,750				
	9-4	12" D.I.C.L. WATER PIPE	LF.	1,000	40	40,000	80	80,000	50	50,000				
TOKEN	9-5	20" D.I.C.L. WATER PIPE	L.F.	10	60	600	40	400	40	400				
	9-6	ADDITIONAL FITTINGS	lb.	73,000	1	73,000	0.01	730	1.20	87,600				
	9-7	3" OR 4" GATE	EA.	15	600	9,000	500	7,500	300	4,500				
	9-8	6" GATE	EA	40	700	28,000	1,000	40,000	600	24,000				
		Total Bid Price →												

* CORRECTED QUANTITY
item 6-5; 150 Ea should have been 1,500

Bid Tabulation

Job Title: SITE PREP " "M-1"
SOUTH END PROJECT R-56

DATE: JULY 14 SHT. 2 OF 2

	ITEM NO.	DESCRIPTION OF ITEM	UNIT	QUANTITY	ENGINEER'S ESTIMATE UNIT PRICE	ENGINEER'S ESTIMATE TOTAL PRICE	SPINIELLO UNIT PRICE	SPINIELLO TOTAL PRICE	M T C UNIT PRICE	M T C TOTAL PRICE				
	9-9	8" GATE	EA.	50	1,000	50,000	1,300	65,000	800	40,000				
	9-10	12" GATE	EA.	75	1,200	90,000	1,600	120,000	1,000	75,000				
	9-11	NOT APPLICABLE												
	9-12	3/4" COPPER SERVICE PIPE	L.F.	8,000	12	96,000	21	168,000	16.50	132,000				
	9-13	1" COPPER SERVICE PIPE	L.F.	600	14	8,400	25	15,000	17	10,200				
	9-14	1½" COPPER SERVICE PIPE	L.F.	500	18	9,000	27	13,500	17.75	8,875				
	9-15	2" COPPER SERVICE PIPE	L.F.	200	20	4,000	30	6,000	18.75	3,750				
	9-16	3/4" CORPORATION STOP	EA.	300	65	19,500	70	21,000	65	19,500				
	9-17	1" CORPORATION STOP	EA.	11	80	880	75	825	70	770				
	9-18	1½" CORPORATION STOP	EA.	20	100	2,000	100	2,000	155	3,100				
	9-19	1½" CORP. STOP WITH 1½"x2 ADAP	EA.	11	170	1,870	200	2,200	200	2,200				
	9-20	3/4" CURB STOP	EA.	300	110	33,000	120	36,000	75	22,500				
	9-21	1" CURB STOP	EA.	11	130	1,430	150	1,650	80	880				
TOKEN	9-22	INSTALL NEW WATER METER	EA.	1	50	50	50	50	50	50				
	9-23	HYDRANT	EA.	25	750	18,750	1,000	25,000	800	20,000				
TOKEN	9-24	HYDRANT REMOVED	EA.	1	600	600	600	600	600	600				
TOKEN	9-25	ADJUST VALVE OR CORP. STOP BOX	EA.	4	100	400	100	400	100	400				
TOKEN	9-26	CLEAN VALVE OR CORP. STOP BOX		4	50	200	50	200	50	200				
	9-27	WATERTIGHT PLUG	EA.	2	250	500	600	1,200	160	320				
	10-1	CEMENT CONCRETE MASONRY	C.Y.	100	40	4,000	40	4,000	65	6500				
	11-1	3" TEMP. BITUMINOUS PAVEMENT	S.Y.	11,000	7	77,000	0.01	110	8.50	93,500				
	11-2	3" COLD PATCH PAVING	TON	150	30	4,500	40	6,000	50	7,500				
TOKEN	11-3	REM & RESET EX. BRICK SIDEWALK	S.Y.	5	60	300	60	300	60	300				
TOKEN	11-4	REM & REPL. MORT. BRICK SIDEWALK	C.F.	5	20	100	20	100	20	100				
	12-1	ENGINEER'S FIELD OFFICE	L.S.	1	5,000	5,000	10,000	10,000	15,000	15,000				
	13-1	HOURS OF SPECIAL DUTY POLICE	HOUR	2,300	900	20,700	9	24,700	9	20,700				
	13-2	HOURS OF SPECIAL DUTY POLICE SGT.	HOUR	100	8.25	825	8.25	825	8.25	825				
		Total Bid Price →			1,416,055.00		1,584,898.00		* 1,592,495.00					

* MTC Total Corrected (incr. 1,350.00) because of Item 6-5.

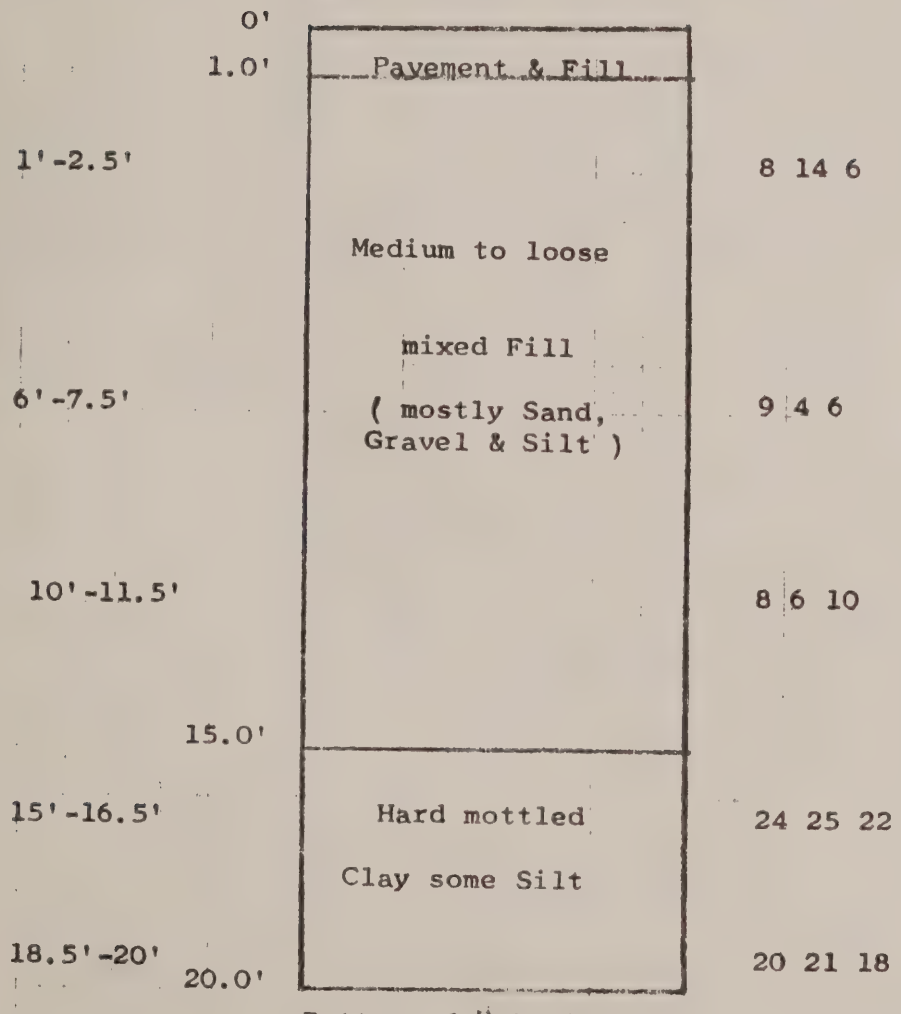
For: Site Preparation Contract "M-1"
Second Advertising

B & J Drilling
25 Winsor Road
Sudbury, Massachusetts 01776

ATTACHMENT NO. 3 (33 pages)
ADDENDUM NO. 1 9/12/75

Southend Urban Renewal
Project R-56
Boston Redevelopment Authority

Boring No. PA- 701-1
H B E - 14.5
Elev. 15.5
Water level- 9.0'



Bottom of Hole 20.0'

Date finished: 8-23-71

Figures to immediate right of boring indicate number of blows to drive a 2" Split Spoon Sampler 6 inches with a 140 lb. weight falling 30" unless otherwise specified.

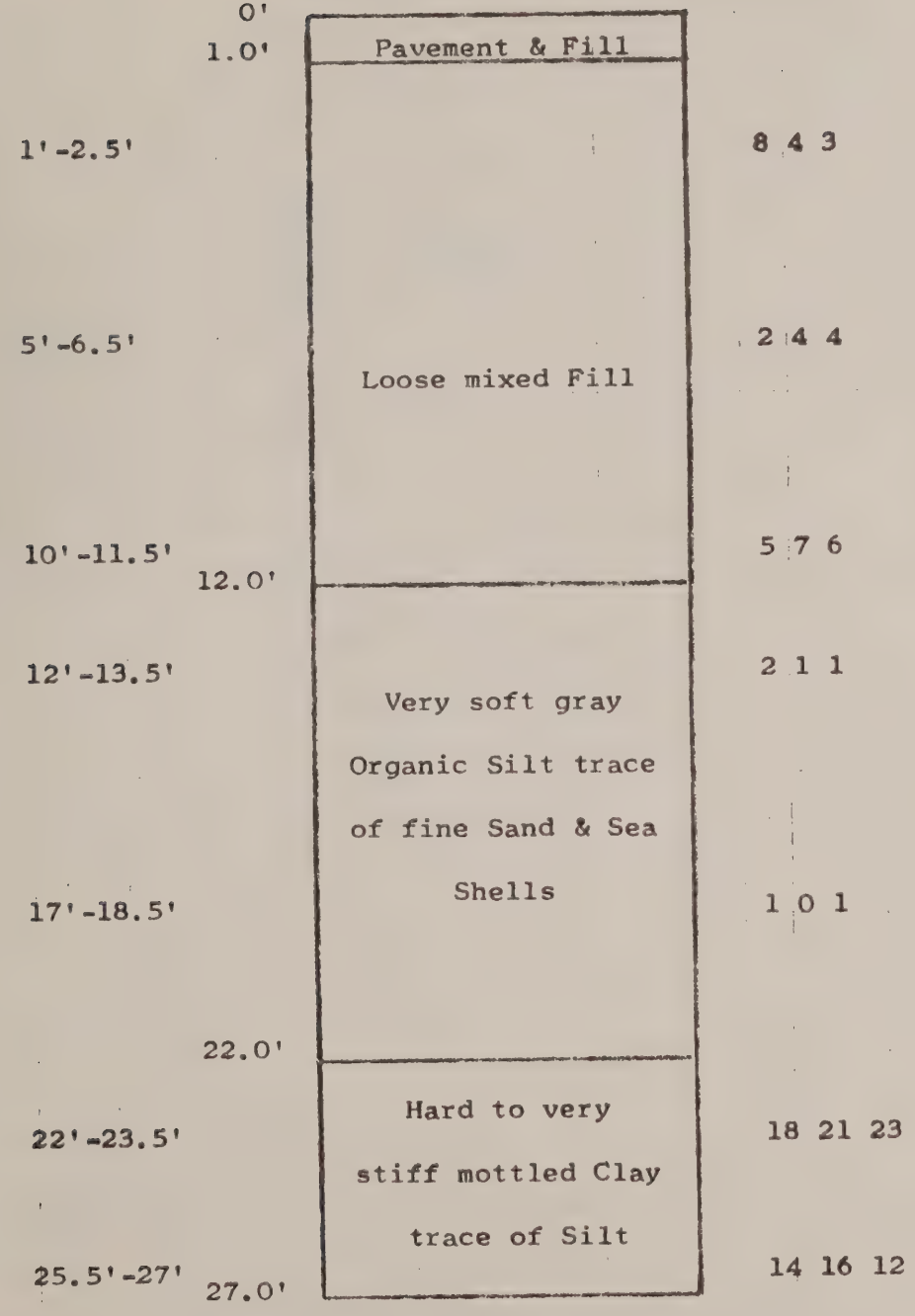
Boring Foreman: P. Manning

Inspector L. Karsadi

B & J Drilling
25 Winsor Road
Sudbury, Massachusetts 01776

Southend Urban Renewal
Project R-56
Boston Redevelopment Authority

Boring No. W-1
H B E - 14.1
Elev.15.9
Water level- 9.0'



Bottom of Hole 27.0'

Date finished: 8-20-71

Fiqures to immediate right of boring indicate number of blows to drive a 2" Split Spoon Sampler 6 inches with a 140 lb. weight falling 30" unless otherwise specified.

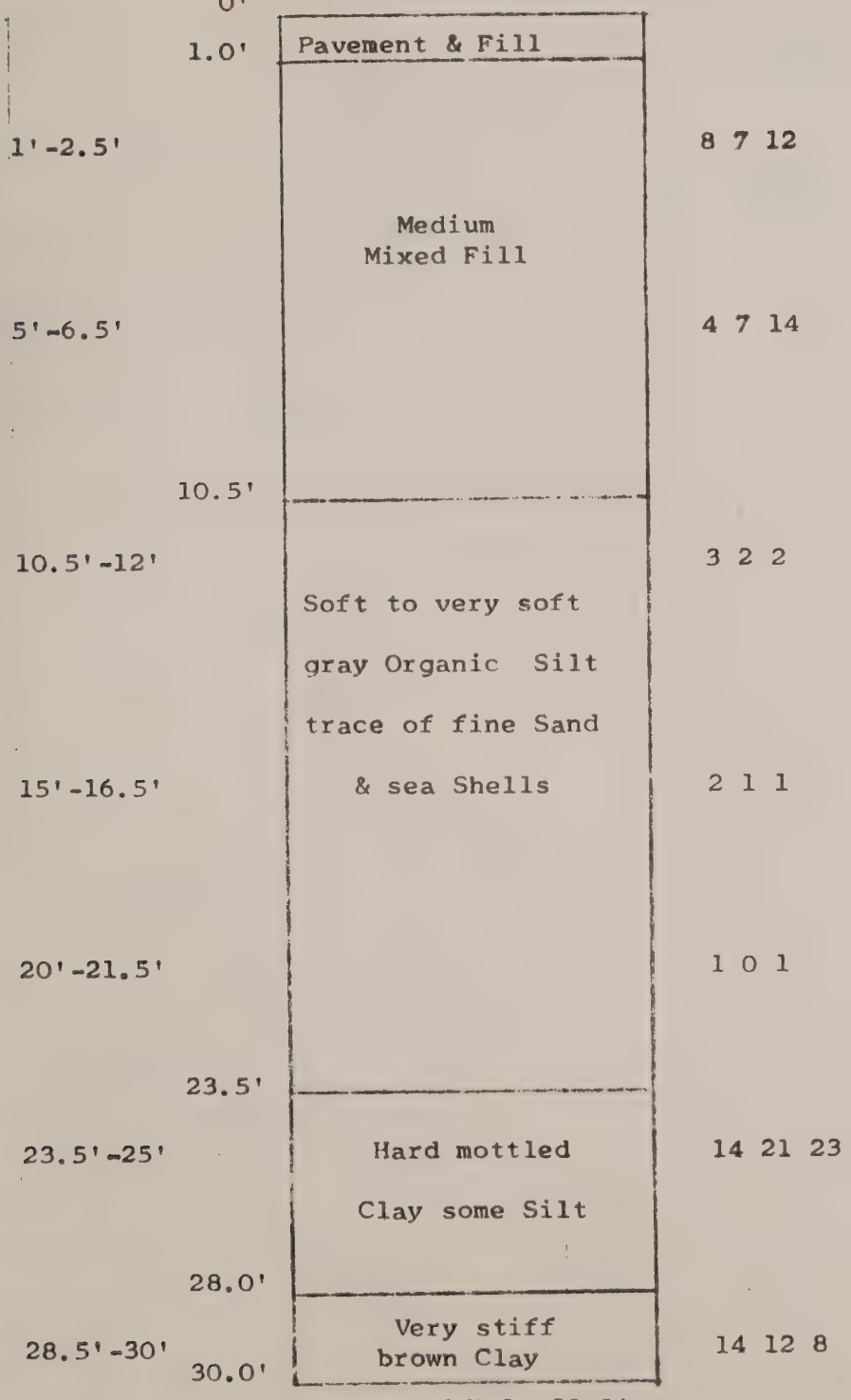
Boring Foreman: P. Manning

Inspector L. Karsadi

B & J Drilling
25 Winsor Road
Sudbury, Massachusetts 01776

Southend Urban Renewal
Project R-56
Boston Redevelopment Authority

Boring No. M-1
H B E - 14.9
Elev. 15.1
Water level- 9.5' at completion



Bottom of Hole 30.0'

Date finished: 8-20-71
Boring Foreman: P. Manning

Inspector L. Karsadi

NORTHEAST TEST BORING CO., INC.
156 Essex Street, Weymouth, Massachusetts

Charles A. Maguire & Associates
178 Tremont Street
Boston, Massachusetts

South End Project R-56
City of Boston, Massachusetts

Hole No. C-1
Elev. 18.0
Water - 10' after 1 hr.

Casing Blows Per Foot				Blows per 6" 0"-6'	6'-12'	12'-18'	Samples No.	Pen.	Rec.
		0.0'							
0		1.0'	Concrete and Fill						
0	1'-4'			Dug out first 4' by Hand					
0									
			Mixed Fill						
26									
31	5'-6.5'			12	21	9	1	18"	18"
41									
46									
42		9.0'							
47									
51	10'-11.5'		Wet, medium, to coarse, brown Sand, and Gravel	16	18	19	2	18"	15"
62									
27									
31		14.0'							
35									
32	15'-16.5'		Wet, very loose, fine, to coarse, brown Sand, trace of Silt	2	2	1	3	18"	14"
30									
29									
26									
24		20.0'							
17	20'-21.5'		Organic Silt	1	2	2	4	18"	17"
18									
		23.0'							

Bottom of hole 23'

REMARKS: Vane snapped while turning in the hole at 23 feet.

Boring conducted on 4-5-68. Boring Foreman P. Manning Inspector J. Stangenberg

NORTHEAST TEST BORING CO., INC.
156 Essex Street, Weymouth, Massachusetts

Charles A. Maguire & Associates
178 Tremont Street
Boston, Massachusetts

South End Project R-56
City of Boston, Massachusetts

Hole No. C-2
Elev. 18.2
Water - 9.5' after ½ hr.

Casing Blows Per Foot			Blows per 6" 0"-6'	6'-12'	12'-18'	Samples No.	Pen.	Rec.
	0.0'							
0	0.5'	Concrete						
0	1'-2.5'	Mixed Fill	6	8	10	1	18"	17"
0								
0		(mostly Sand and						
31	5.0'	Gravel)						
24	5'-6.5'	Very compact, brown	34	21	18	2	18"	16"
21								
19		Sand, Gravel &						
17		Cobbles						
8	9.5'	(probably fill)						
9	10'-11.5'	Wet, very loose,	2	1	3	3	18"	10"
9								
10		brown Sand &						
12	14.0'	Gravel						
14								
16	15'-16.5'	Organic Silt, some	4	8	6	4	18"	15"
17								
15		Sand and						
17								
18								
27	20'-21.5'	Shells	6	6	5	5	18"	18"
29								
30								
35	24.0'							
62	25'-26.5'	Very compact, Sand and Gravel	34	54	43	6	18"	1"
	26.5'	Bottom of hole 26.5'						

REMARKS: Last sample recovered stone, pushed small cobble.

Borings conducted on 3-7-68. Boring Foreman P. Manning Inspector J.Hennessy

NORTHEAST TEST BORING CO., INC.
156 Essex Street, Weymouth, Massachusetts

Charles A. Maguire & Associates
178 Tremont Street
Boston, Massachusetts

South End Project R-56
City of Boston, Massachusetts

Hole No. C-3
Elev. 18.2
Water - 10' after 1 hr.

Casing Blows Per Foot			Blows per 6" 0"-6'	6'-12'	12'-18'	Samples No.	Pen.	Rec.
	0.0'							
10	0.5'	Concrete						
26	2'-3.5'	Mixed Fill	32	46	38	1	18"	12"
28								
28		Sand, Gravel and						
34	5.0'	Cobbles						
19								
18	7.5'-9'	Medium, brown Sand	7	7	8	2	18"	12"
18								
19								
20		and Gravel						
22	11.0'							
18	12'-13.5'	Wet, very loose,	2	3	2	3	18"	12"
16								
16		brown & gray,						
15								
15		silty Sand, some						
14	17.5'-19'	fine Gravel	2	2	1	4	18"	12"
15	18.0'							
15								
16		Moist, loose, grayish						
16								
16		Sand, some						
17	22.5'-24'	Organic Silt, running	4	3	4	5	18"	12"
22								
25		in layers						
25								
36	26.5'							
		Very stiff, Clay						
	28.5'-30'	(some plasticity)	8	10	10	6	18"	16"
	30.0'							

Bottom of hole 30'

Borings conducted on 3-8-68. Boring Foreman C. Reil Inspector J. Hennessy

NORTHEAST TEST BORING CO., INC.
156 Essex Street, Weymouth, Massachusetts

Charles A. Maguire & Associates
178 Tremont Street
Boston, Massachusetts

South End Project R-56
City of Boston, Massachusetts

Hole No. C-4
Elev. 18.0
Water - 10' after 1 hr.

Casing Blows Per Foot				Blows per 6" 0"-6'	6'-12'	12'-18'	Sample No.	Pen.	Rec.
		0.0'							
		0.5'	Concrete						
10 12	1'-2.5'		Loose, fine, to coarse, brown Sand, trace of Gravel (Clean Fill)	5	7	5	1	18"	16"
10 11									
8 9	5'-6.5'			4	3	3	2	18"	15"
12 18									
20 24		10.0'							
25 27	10'-11.5'		Wet, compact, silty, br. Sand, tr. of Gravel	21	18	15	3	18"	13"
		12.0'							
19 16			Moist, compact,						
20 21	15'-16.5'		to very compact,	18	12	13	4	18"	17"
18 24			Sand and						
23 27									
31 10	20'-21.5'		Gravel, trace of Silt	30	28	24	5	18"	14"
		22.0'							
9 9			Organic Silt, trace of Sand						
10 11	25'-26.5'			4	2	2	6	18"	18"
15		27.0'							
	28.5'-30'		Very stiff, blue Clay (some plasticity)	16	18	19	7	18"	18"
		30.0'							

Bottom of hole 30'

Borings conducted on 2-29-68. Boring Foreman P. Manning Inspector J. Hennessy

NORTHEAST TEST BORING CO., INC.
156 Essex Street, Weymouth, Massachusetts

Charles A. Maguire & Associates
178 Tremont Street
Boston, Massachusetts

South End Project R-56
City of Boston, Massachusetts

Hole No. C-5
Elev. 18.2
Water - 10' after 1 hr.

Casing Blows Per Foot				Blows per 6" 0"-6'	6'-12'	12'-18'	Samples No.	Pen.	Rec.
		0.0'							
0		1.0'	Pavement and Fill						
56	1'-2.5'			12	10	11	1	18"	16"
41									
37			Medium, to loose,						
32									
21	5'-6.5'		Mixed Fill	8	7	7	2	18"	15"
17									
25									
29									
24									
25	10'-11.5'		(mostly Sand & Gravel	3	5	4	3	18"	15"
25									
26									
30									
28									
26	15'-16.5'			2	4	4	4	18"	15"
26									
29		18.0'							
35									
44			Wet, loose, fine,						
90	20'-21.5'			3	5	4	5	18"	14"
75			to coarse, gray						
110									
105		24.0'	Sand and Gravel						
120									
	26.25'-27'		Organic Silt	VANE SHEAR TEST #1					
		27.0'							
	26.5'-28'		Hard, to very stiff,	13	27	38	6	18"	18"
			brown Clay						
	31.5'-33'		(some plasticity)	11	12	12	7	18"	18"
		33.0'							

Bottom of hole 33'

REMARKS: Material far to stiff for Shear test- Bent Vane.

Boring conducted on 4-4-68. Boring Foreman P. Manning Inspector J. Stangenberg

NORTHEAST TEST BORING CO., INC.
156 Essex Street, Weymouth, Massachusetts

Charles A. Maguire & Associates
178 Tremont Street
Boston, Massachusetts

South End Project R-56
City of Boston, Massachusetts

Hole No. C-6
Elev. 18.2
Water - 9.5' after 1 hr.

Casing Blows Per Foot			Blows per 6" 0"-6'	6'-12'	12'-18'	Samples No.	Pen.	Rec.
	0.0'							
4 4 6 7 8	2'-3.5'	Loose, Mixed Fill	2	3	3	1	18"	12"
13 15	6.5'							
15 13 16 16 17	9'-10.5'	Moist, brown Sand and Gravel, trace of Silt	6	7	13	2	18"	12"
17 17 19	13'-14.5'		9	13	14	3	18"	12"
	15.0'							
9 9 8 9 9 6	19.5'-21'	Silty, brown Sand (6" strata of Gravel at 18'-18.5')	4	7	8	4	18"	14"
	21.0'							
5 5 5 7 9 22	25'-26.5'	Organic Silt	3	3	6	5	18"	15"
	27.0'							
	30'-31.5'	Very stiff, yellow-brown Clay (some plasticity)	10	10	9	7	18"	14"
	35'-36.5'							
	37.0'							
	40'-41.5'	Stiff, gray Clay (very plastic)	6	6	5	8	18"	14"
	41.5'							

Bottom of hole 41.5'

Boring conducted on 2-29-68. Boring Foreman C. Reil Inspector J. Hennessy

NORTHEAST TEST BORING CO., INC.
156 Essex Street, Weymouth, Massachusetts

Charles A. Maguire & Associates
178 Tremont Street
Boston, Massachusetts

South End Project R-56
City of Boston, Massachusetts

Hole No. C-7
Elev. 17.5
Water - 11' after 1 hr.
Well Point placed at 20'

Casing Blows Per Foot				Blows per 6" 0"-6'	6'-12'	12'-18'	Samples No.	Pen.	Rec.
		0.0'							
0		1.0'	Pavement and Fill						
23	1'-2.5'			3	4	4	1	18"	14"
17									
15			Loose,						
14									
28	5'-6.5'			2	4	3	2	18"	12"
27			Mixed Fill						
20									
18									
16		10.0'							
31	10'-11.5'			4	6	4	3	18"	15"
39									
33			Wet,						
38									
27	15'-16.5'			5	4	6	4	18"	15"
48			loose, coarse, gray						
62									
67			Sand & Gravel						
55									
42				Well Point placed at 20'					
38		21.0'							
31	20'-21.5'			4	1	1	5	18"	18"
14									
16	24'-25'			VANE SHEAR TEST #1					
15									
16			Organic Silt						
17									
15	27'-29'			PISTON I Rec. 23.5"					
14			and						
			See Shells						
		32.5'							
	33'-34.5'		Dry, Black Peat	2	3	6	6	18"	18"
		34.5'							
	34.5'-35'		Hard, blue Clay (some plasticity)	21 for 6"			7	6"	6"
		37.0'							
	38.5'-40'		Very stiff, brown Clay (plastic)	11	10	12	8	18"	18"
		40.0'							

Bottom of hole 40'

Boring conducted on 4-4-68. Boring Foreman P. Manning Inspector J.Stangenberg

NORTHEAST TEST BORING CO., INC.
156 Essex Street, Weymouth, Massachusetts

Charles A. Maguire & Associates
178 Tremont Street
Boston, Massachusetts

South End Project R-56
City of Boston, Massachusetts

Hole No. C-8
Elev. 16.2
Water - 9' after 1 hr.

Casing Blows Per Foot			Blows per 6" 0"-6'	6'-12'	12'-18'	Samples No.	Pen.	Rec.
	0.0'							
0	0.5'	Concrete						
2	0.5'-2'	Loose, Mixed Fill (mostly Sand and Gravel)	2	2	2	1	18"	12"
3								
2								
1								
12	5'-6.5'		4	5	4	2	18"	14"
14								
15								
12	8.5'							
21	9'-10.5'	Moist, medium, fine, to coarse, brown Sand and Gravel	8	12	11	3	18"	13"
17								
10								
12								
14								
24	14'-15.5'		13	15	18	4	18"	12"
	15.5'							
16		Wet, very loose, silty, gray Sand						
18								
8								
10								
12								
14	20'-21.5'		1	1	1	No Sample		
18								
17	22.5'							
46		Organic Silt, trace of Sand and Shells						
47	25'-26.5'		2	2	2	5	18"	16"
36								
35								
37								
	29'-30.5'		2	2	2	6	18"	18"
	34.0'							
	35'-36.5'	Dry, Black Silt	4	4	4	7	18"	18"
	38.0'							
	39'-40.5'	Hard, yellow Clay (slightly plastic)	16	18	18	No Sample		
	40.5'-42'		18	18	18	8	18"	18"
	42.0'							

Bottom of hole 42'

Boring Conducted on 2-28-68. Boring Foreman P. Manning Inspector J. Hennessy

NORTHEAST TEST BORING CO., INC.
156 Essex Street, Weymouth, Massachusetts

Charles A. Maguire & Associates
178 Tremont Street
Boston, Massachusetts

South End Project R-56
City of Boston, Massachusetts

Hole No. T-1
Elev. 16.0
Water - 8' after ½ hr.

Casing Blows Per Foot				Blows per 6" 0"-6'	6'-12'	12'-18'	Samples No.	Pen.	Rec.
		0.0'							
0		1.0'	Concrete & frozen Fill						
115 81 47	2.5'-4'	4.5'	Very compact, silty Sand and Gravel (Fill)	96	58	38	1	18"	17"
28 12	5'-6.5'		Silt & silty Sand (appears to be top Soil)	14	7	5	2	18"	18"
10 6		7.0'							
11	7'-8.5'		Fiberous black Peat and silty Sand	4	2	2	3	18"	18"
12		10.0'							
20 18 16	11'-12.5'		Stiff, gray Clay, trace of silty Sand (very plastic)	10	12	15	4	18"	16"
14		14.0'							
21	15'-16.5'		Very stiff, brown Clay, trace of Sand	13	12	12	5	18"	18"
	20'-21.5'		(some plasticity)	11	10	10	6	18"	18"
		23.5'							
	25'-26.5'		Very stiff, brown Clay (some plasticity)	11	11	12	7	18"	18"
	28.5'-30'			11	12	10	8	18"	18"
		30.0'							

Bottom of hole 30'

Boring conducted on 3-2-68. Boring Foreman P. Manning Inspector J. Hennessy

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Charles A. Maguire & Associates
178 Tremont Street
Boston, Massachusetts

South End Project R-56
City of Boston, Massachusetts

Hole No. T-2
Elev. 16.0
Water - 4' after ½ hr.
Well Point 13'

Casing Blows Per Foot			Blows per 6" 0"-6'	6'-12'	12'-18'	Samples No.	Pen.	Rec.
	0.0'							
0	1.0'	Concrete & Sand						
8								
9	1'-2.5'	Loose, Mixed Fill	4	6	5	1	18"	14"
10								
9								
11	5'-6.5'	(Wet at 4')	7	6	7	2	18"	15"
12								
14								
10	8.5'							
24	9'-10.5'	Silty Sand, some Clay (slightly plastic)	8	10	11	3	18"	17"
26								
	13.0'		Well Point placed at 13'					
		Hard, brown Clay						
	15'-16.5'		18	23	24	4	18"	18"
		(some plasticity)						
	20'-21.5'		16	18	15	5	18"	18"
	22.0'							
		Stiff, gray Clay						
	25'-26.5'	(very plastic)	4	5	4	6	18"	18"
	28.5'-30'		4	5	5	7	18"	18"
	30.0'							

Bottom of hole 30'

Boring conducted on 3-11-68. Boring Foreman P. Manning Inspector J. Hennessy

NORTHEAST TEST BORING CO., INC.
156 Essex Street, Weymouth, Massachusetts

Charles A. Maguire & Associates
178 Tremont Street
Boston, Massachusetts

South End Project R-56
City of Boston, Massachusetts

Hole No. T-3
Elev. 16.2
Water - 12' after ½ hr.

Casing Blows Per Foot				Blows per 6" 0"-6'	6'-12'	12'-18'	Samples No.	Pen.	Rec.
		0.0'							
10		0.5'	Sidewalk						
6									
6			Loose, Mixed Fill						
5									
7			(mostly Sand and						
11	5'-6.5'			5	4	4	1	18"	13"
4			Gravel)						
3		7.5'							
18	7.5'-9'		Hard, gray-yellow Clay	14	15	17	2	18"	17"
19		10.0'	trace of silty Sand						
26									
25									
28									
32			Hard, yellow						
34	14'-15.5'			11	15	19	3	18"	18"
37			Clay						
31									
34			(some plasticity)						
		19.0'							
	20'-21.5'		Very stiff, yellow-gray Clay,	8	8	8	4	18"	18"
			trace of Silt						
	24.5'-26'		(some plasticity)	7	8	9	5	18"	16"
		25.0'							
			Very stiff, gray Clay, trace of Silt						
	28.5'-30'		(some plasticity)	9	9	11	6	18"	16"
		30.0'							
			Bottom of hole 30'						

Boring conducted on 3-4-68. Boring Foreman J. Boyle Inspector J. Hennessy

NORTHEAST TEST BORING CO., INC.
156 Essex Street, Weymouth, Massachusetts

Charles A. Maguire & Associates
178 Tremont Street
Boston, Massachusetts

South End Project R-56
City of Boston, Massachusetts

Hole No. T-4
Elev. 16.0
Water - None

Casing Blows Per Foot			Blows per 6" 0"-6'	6'-12'	12'-18'	Samples No.	Pen.	Rec.
	0.0'							
26								
47	2.5'-4'		26	14	9	1	18"	12"
43								
40		Mixed Fill						
29								
24	6.5'-8'		16	14	17	2	18"	12"
17								
18								
18								
20	10.5'-12'		22	7	7	3	18"	15"
22	11.0'							
11		Mixed Fill (Sand, Silt, Clay, Gravel trace of Peat)						
13								
15	14.0'							
26	15'-16.5'	Stiff, brown Clay (very plastic)	6	5	8	4	18"	18"
29								
	19.0'							
	20'-21.5'	Very stiff, brown Clay (some plasticity)	12	14	15	5	18"	18"
	25'-26.5'		11	10	12	6	18"	18"
	28.0'							
	28.5'-30'	Very stiff, gray Clay (quite plastic)	7	8	7	7	18"	18"
	30.0'							

Bottom of hole 30'

Boring conducted on 3-5-68. Boring Foreman P. Manning Inspector J. Hennessy

NORTHEAST TEST BORING CO., INC.
156 Essex Street, Weymouth, Massachusetts

Charles A. Maguire & Associates
178 Tremont Street
Boston, Massachusetts

South End Project R-56
City of Boston, Massachusetts

Hole No. WS-1
Elev. 17.5
Water -10' after 1 hr.

Casing Blows Per Foot			Blows per 6" 0"-6'	6'-12'	12'-18'	Samples No.	Pen.	Rec.
	0.0'							
0		Concrete & frozen Fill						
47	1.5'							
31	2'-3.5'	Mixed Fill	8	8	6	1	18"	13"
14								
12		(mostly Sand and						
10	5'-6.5'	Gravel)	9	8	10	2	18"	15"
10								
[illegible]								
14								
19	9.5'							
16	10'-11.5'	Mixed Fill	12	9	10	3	18"	14"
18								
29	13.0'							
25		Very stiff, brown						
27		Clay						
	15'-16.5'	(some plasticity)	14	15	16	4	18"	18"
	20'-21.5'		12	12	13	5	18"	18"
	23.0'							
	23.5'-25'	Very stiff, gray Clay (some plasticity)	10	10	12	6	18"	18"
	25.0'							

Bottom of hole 25'

Boring conducted on 3-7-68. Boring Foreman P. Manning Inspector J. Hennessy

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156 Essex Street, Weymouth, Massachusetts

Charles A. Maguire & Associates
178 Tremont Street
Boston, Massachusetts

South End Project R-56
City of Boston, Massachusetts

Hole No. WS-2
Elev. 15.0
Water - None

Casing Blows Per Foot			Blows per 6" 0"-6'	6'-12'	12'-18'	Samples No.	Pen.	Rec.
	0.0'							
4 7 8	2'-3.5'	Sand and Gravel (Fill)	5	5	13	1	18"	12"
	3.0'							
13 25 38	6'-7.5'	Hard, to very stiff, yellow-brown Clay, trace of silty	18	18	19	2	18"	12"
38 32 32	11'-12.5'		10	12	14	3	18"	15"
	14.5'-16'	Sand	9	8	8	4	18"	16"
	18.5'-20'		8	6	7	5	18"	15"
	20.0'							

Bottom of hole 20'

Boring Conducted on 3-6-68. Boring Foreman C. Reil Inspector J. Hennessy

Charles A. Maguire 60 First Ave. Waltham, Mass.	**B & J DRILLING** 25 WINDSOR ROAD SUDBURY, MASS. 01776	HOLE NO. E-2 LINE & STA. OFFSET
JOB LOCATION	Boston, Mass.	SURFACE ELEV.
PROJECT NAME	Sewers and Drains Contract E	WATER LEVEL 10'10"
DATE STARTED	June 28, 1972	BORING FOREMAN T. Smith
DATE FINISHED	June 28, 1972	INSPECTOR S. McNeice

SCALE IN FEET	SAMPLE DEPTH FROM	SAMPLE DEPTH TO	30" BLOWS PER 6" ON SAMPLER	STRATA CHANGE	FIELD CLASSIFICATION AND REMARKS
	0.5'	2'	6 5-2		6" Concrete, Mixed Fill; loose fine brown Sand, trace of fine Gravel (dry)
5	5'	6.5'	2-2 2		
10	10'	11.5'	4-3 3		
				14.5'	
15	15'	16.5'	3-4 3		Loose fine to coarse brown Sand, and fine to coarse Gravel (wet)
				18.5'	
20	20'	21.5'	2-1 2		Soft dark gray organic Silt, trace of broken Shells (moist)
				23.0'	
25	25'	26.5'	14-18 22		Hard brown-gray Clay (moist)
				30.0'	
30	30'	31.5'	7-7 8		Very stiff gray-brown Clay (moist)
35	35'	36.5'	10-11 11	36.5'	Bottom of Hole 36.5'

REMARKS: Washed ahead and sampled from 20' to 36.5' without casing because hole stayed open.

BLOW COUNT TAKEN WITH 140 LB. WEIGHT FALLING 30" ON 2" O.D. SPLIT SPOON UNLESS OTHERWISE SPECIFIED

PROPORTIONS USED: TRACE = 0 - 10%, SOME = 10 - 35%, AND = 35 - 50%

Charles A. Maguire	**B & J DRILLING**	HOLE NO. E-9
60 First Ave.	25 WINDSOR ROAD	LINE & STA.
Waltham, Mass.	SUDBURY, MASS. 01776	OFFSET
JOB LOCATION	Boston, Mass.	SURFACE ELEV.
PROJECT NAME	Sewers and Drains Contract E	WATER LEVEL 9'6"
DATE STARTED	June 23, 1972	BORING FOREMAN T. Smith
DATE FINISHED	June 23, 1972	INSPECTOR S. McNeice

SCALE IN FEET	SAMPLE DEPTH FROM	SAMPLE DEPTH TO	30" BLOWS PER 12"6" ON SAMPLER	STRATA CHANGE	FIELD CLASSIFICATION AND REMARKS
	0	1.5'	2-1 2		4" Concrete Mixed Fill; very loose fine brown Sand, some fine to medium Gravel, Brick and Cinders (dry)
5	5'	6.5'	2-2 1	9.0'	
10	10'	11.5'	7-6 8		Very stiff brown-gray Clay (moist)
15	15'	16.5'	8-14 17		
20	20'	21.5'	10-12 13	24.0'	
25	25'	26.5'	8-11 10		Very stiff gray Clay (moist)
30	30'	31.5'	9-9 6	31.5'	Bottom of Hole 13.5'

REMARKS: Washed ahead and sampled without casing from 10' to 31.5' because hole stayed open.

BLOW COUNT TAKEN WITH 140 LB. WEIGHT FALLING 30" ON 2" O.D. SPLIT SPOON UNLESS OTHERWISE SPECIFIED

PROPORTIONS USED: TRACE = 0 - 10%, SOME = 10 - 35%, AND = 35 - 50%

Charles A. Maguire 60 First Ave. Waltham, Mass.	**B & J DRILLING** 25 WINDSOR ROAD SUDBURY, MASS. 01776	HOLE NO. E-10 LINE & STA. OFFSET
JOB LOCATION	Boston, Mass.	SURFACE ELEV.
PROJECT NAME	Sewers and Drains Contract E	WATER LEVEL 9'0"
DATE STARTED	June 23, 1972	BORING FOREMAN T. Smith
DATE FINISHED	June 23, 1972	INSPECTOR S. McNeice

SCALE IN FEET	SAMPLE DEPTH FROM	SAMPLE DEPTH TO	30" BLOWS PER 6" ON SAMPLER	STRATA CHANGE	FIELD CLASSIFICATION AND REMARKS
	0	1.5'	5-4 2		4" Concrete Mixed Fill; loose fine to medium brown Sand, trace of fine Gravel (dry)
5	5'	6.5'	5-6 5	7.0'	
					Medium dark gray organic Silt, some fine to medium Sand, trace of fine to medium Gravel (wet)
10	10'	11.5'	4-5 5	13.5'	
					Very stiff brown-gray Clay (moist)
15	15'	16.5'	9-11 14	20.0'	
20	20'	21.5'	7-5 7		
					Stiff gray Clay (moist)
25	25'	26.5'	5-5 6		
30	30'	31.5'	5-6 5	31.5'	
					Bottom of Hole 31.5'

REMARKS: Washed ahead and sampled without casing from 15' to 31.5' because hole stayed open.

BLOW COUNT TAKEN WITH 140 LB. WEIGHT FALLING 30" ON 2" O.D. SPLIT SPOON UNLESS OTHERWISE SPECIFIED

PROPORTIONS USED: TRACE = 0 - 10%, SOME = 10 - 35%, AND = 35 - 50%

C. L. GUILD DRILLING & BORING CO., INC.

Avon, Mass.

SHEET 1 OF 2
DATE 14 JANUARY 75
HOLE NO HI-2
LINE & STA
OFFSET

TO C E MAGUIRE, INC. | ADDRESS WALTHAM, MASSACHUSETTS
PROJECT NAME SOUTH END URBAN RENEWAL | LOCATION BOSTON, MASSACHUSETTS
REPORT SENT TO ABOVE - ATTN - MR. STANGENBERG | PROJ. NO. R-56
SAMPLES SENT TO ABOVE - ATTN - MR. STANGENBERG | OUR JOB NO. 53084

GROUND WATER OBSERVATIONS
At 10'4 ft after 4-1/2 Hours
At ____ ft after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type		S/S	
Size I.D	2-1/2"	1-3/8"	
Hammer Wt.	300	140	BIT
Hammer Fall	24"	30"	

SURFACE ELEV. 20.5'
DATE STARTED 1-8-75
DATE COMPL. 1-9-75
BORING FOREMAN J. TEXIERA
INSPECTOR C. DIAZ
SOILS ENGR. J. STANGENBERG

LOCATION OF BORING

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No	Pen	Rec
								0'6	CONCRETE			
0	1											
	1	0'6 - 2'	D	3	7	3	LOOSE		BROWN GRAVEL LITTLE SAND	1	18	9
	2											
	4								- FILL -			
	4							5'0				
	5	5' - 6'6	D	1	1	2	LOOSE			2	18	14
	5											
	6								BROWN SAND SOME GRAVEL			
	7											
10	7											
	2	10' - 11'6	D	3	2	3	"		- FILL -	3	18	4
	2											
	5											
	8											
	8							15'0				
	1	15' - 16'6	D	2	1	1	LOOSE			4	18	5
	1											
	1								BROWN SAND LITTLE GRAVEL			
	2											
20	5											
	3	20' - 21'6	D	2	2	1	"		- FILL -	5	18	8
	3											
	4											
	3											
	4							25'0				
	3	25' - 26'6	D	3	3	4	MEDIUM STIFF			6	18	12
	3											
	4											
	4								DARK GRAY ORGANIC SILT			
	4											
30	4	30' - 31'6	D	3	3	3	"			7	18	18
	4											
	3								TRACE OF SHELLS			
	4											
	3											
	5	35' - 36'6	D	4	3	4	"			8	18	18
	5											
	4											
	5											
40	16							40'0				

GROUND SURFACE TO 45 FT., USED 2-1/2 "CASING: TYCN SAMPLED TO BOTTOM OF BORING

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler

Cohesionless Density		Cohesive Consistency		
0-10	Loose	0-4	Soft	30 + Hard
10-30	Med. Dense	4-8	M/Stiff	
30-50	Dense	8-15	Stiff	
50 +	Very Dense	15-30	V-Stiff	

SUMMARY:
Earth Boring 46'6
Rock Coring
Samples 10

HOLE NO. HI-2

C. L. GUILD DRILLING & BORING CO., INC.

Avon, Mass.

SHEET 2 OF 2
DATE
HOLE NO HI-2
LINE & STA
OFFSET

TO
PROJECT NAME
REPORT SENT TO
SAMPLES SENT TO
ADDRESS
LOCATION
PROJ. NO.
OUR JOB NO. 53084

GROUND WATER OBSERVATIONS

At ____ ft after ____ Hours

At ____ ft after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I D			
Hammer Wt.			BIT
Hammer Fall			

SURFACE ELEV
DATE STARTED
DATE COMPL.
BORING FOREMAN
INSPECTOR
SOILS ENGR.

LOCATION OF BORING

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No	Pen	Rec
40	16	40' - 41'6	D	8	8	9	VERY STIFF		YELLOW - GRAY CLAY	9	18	16
	20								TRACE OF FIBERS			
	23											
	26											
	28							45'0				
		45' - 46'6	D	4	5	7	STIFF	46'6	YELLOW - GRAY CLAY	10	18	18
50									BOTTOM OF BORING			
									46'6			
									- REQUIRED DEPTH -			
60												
70												
80												

GROUND SURFACE TO ____ FT., USED ____ "CASING: THEN ____

Sample Type
D = Dry C = Cored W = Washed
UP = Undisturbed Piston
TP = Test Pit A = Auger V = Vane Test
UT = Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler

Cohesionless Density		Cohesive Consistency	
0-10	Loose	0-4	Soft
10-30	Med. Dense	4-8	M/Stiff
30-50	Dense	8-15	Stiff
50 +	Very Dense	15-30	V-Stiff
		30 +	Hard

SUMMARY:
Earth Boring
Rock Coring
Samples

HOLE NO. HI-2

C. L. GUILD DRILLING & BORING CO., INC.

Avon, Mass.

SHEET 1 OF 2
DATE 14 JANUARY 75
HOLE NO. HI-7
LINE & STA
OFFSET

TO C E MAGUIRE, INC. ADDRESS WALTHAM, MASSACHUSETTS
PROJ. NAME SOUTH END URBAN RENEWAL LOCATION BOSTON, MASSACHUSETTS
REPORT SENT TO ABOVE-ATTN-MR. STANGENBERG PROJ. NO. R-56
SAMPLES SENT TO ABOVE-ATTN-MR. STANGENBERG OUR JOB NO. 53084

GROUND WATER OBSERVATIONS
At 9'3 ft after 5 Hours
At ft after Hours

	CASING	SAMPLER	CORE BAR.
Type		S/S	
Size I.D	2-1/2"	1-3/8"	
Hammer Wt.	300	140	BIT
Hammer Fall	24"	30"	

SURFACE ELEV. 18.0'
DATE STARTED 1-6-75
DATE COMPL. 1-7-75
BORING FOREMAN J. TEXIERA
INSPECTOR C. DIAZ
SOILS ENGR. J. STANGENBERG

LOCATION OF BORING

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No	Pen	Rec
								0'6	BLACKTOP	1	18	16
0	19	0' - 1'6	D	69	10	23	DENSE		BROWN SAND, SOME GRAVEL TRACE OF CLAY & BRICK -FILL-			
	20											
	23											
	24											
	20											
	10	5' - 6'6	D	12	12	13	MEDIUM DENSE			2	18	14
	5											
	4											
	3											
	7							10'0				
10	3	10' - 11'6	D	3	2	3	LOOSE		BROWN CINDERS SOME CLAY -FILL-	3	18	10
	3											
	3											
	2											
	3							15'0				
	6	15' - 16'6	D	2	2	3	SOFT		DARK BROWN PEATY ORGANIC SILT	4	18	18
	6											
	7											
	7							19'6				
20	14											
	33	20' - 21'6	D	7	12	19	HARD		YELLOW-GRAY CLAY	5	18	18
	41											
	59											
	54											
	41							25'0				
	48	25' - 26'6	D	7	12	11	VERY STIFF		YELLOW CLAY	6	18	18
	51											
	56											
	57											
	56							30'0				
30	64	30' - 31'6	D	3	5	7	STIFF		BLUE CLAY	7	18	10
	64											
	58											
	53											
	63											
	58	35' - 36'6	D	2	4	5	"			8	18	12
	61											
	60											
	57											
40	65											

GROUND SURFACE TO 70 FT., USED 2-1/2 "CASING: THEN SAMPLED TO BOTTOM OF BORING

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%

140 lb Wt. x 30" fallen 2" O.D. Sampler

Cohesionless Density		Cohesive Consistency		
0-10	Loose	0-4	Soft	30+ Hard
10-30	Med. Dense	4-8	M/Stiff	
30-50	Dense	8-15	Stiff	

SUMMARY:
Earth Boring 71'6
Rock Coring
Samples 15

HOLE NO HI-7

C. L. GUILD DRILLING & BORING CO., INC.

Avon, Mass.

SHEET 2 OF 2
DATE
HOLE NO. HI-7
LINE & STA
OFFSET

TO
PROJ. NAME
REPORT SENT TO
SAMPLES SENT TO
ADDRESS
LOCATION
PROJ. NO.
OUR JOB NO. 53084

GROUND WATER OBSERVATIONS

At ____ ft after ____ Hours

At ____ ft after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D			
Hammer Wt.			BIT
Hammer Fall			

SURFACE ELEV.
DATE STARTED
DATE COMPL.
BORING FOREMAN
INSPECTOR
SOILS ENGR.

LOCATION OF BORING

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness; Drilling time, seams and etc.	SAMPLE No	Pen	Rec
40	59	40' - 41'6	D	3	5	6	STIFF			9	18	16
	58											
	60											
	62											
	58											
	61	45' - 46'6	D	5	7	8	"		BLUE CLAY	10	18	16
	62											
	59											
	58											
	60											
50	57	50' - 51'6	D	3	5	6	"			11	18	16
	66											
	67							53'0				
	89											
	93											
	37	55' - 56'6	D	9	11	12	MEDIUM DENSE		GRAY FINE TO COARSE SAND & CLAY, LITTLE FINE TO MEDIUM GRAVEL	12	18	9
	29											
	30											
	38											
	38							60'0				
60	49	60' - 61'6	D	1	4	7	STIFF			13	18	15
	59											
	56								BLUE CLAY LITTLE FINE GRAVEL TRACE OF FINE SAND			
	54											
	58											
	53	65' - 66'6	D	5	4	4	MEDIUM STIFF			14	18	16
	58											
	65											
	60											
	67							70'0				
70		70' - 71'6	D	4	4	5	STIFF	71'6	BLUE CLAY	15	18	12
									BOTTOM OF BORING 71'6 - REQUIRED DEPTH -			
80												

DROVE CASING WITH 440LB. WEIGHT

GROUND SURFACE TO ____ FT., USED ____ "CASING: THEN ____

Sample Type
D: Dry C: Cored W: Washed
UP: Undisturbed Piston
TP: Test Pit A: Auger V: Vane Test
UT: Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler

Cohesionless Density		Cohesive Consistency	
0-10	Loose	0-4	Soft
10-30	Med. Dense	4-8	M/Stiff
30-50	Dense	8-15	Stiff
50 +	Very Dense	15-30	V-Stiff
		30 +	Hard

SUMMARY:
Earth Boring
Rock Coring
Samples

HOLE NO. HI-7

C. L. GUILD DRILLING & BORING CO., INC.

Avon, Mass.

SHEET 1 OF 1
DATE 14 JANUARY 75
HOLE NO. HI-8
LINE & STA
OFFSET

TO C E MAGUIRE, INC. ADDRESS WALTHAM, MASSACHUSETTS
PROJECT NAME SOUTH END URBAN RENEWAL LOCATION BOSTON, MASSACHUSETTS
REPORT SENT TO ABOVE-ATTN-MR. STANGENBERG PROJ. NO. R-56
SAMPLES SENT TO ABOVE-ATTN-MR. STANGENBERG OUR JOB NO. 53084

GROUND WATER OBSERVATIONS
9'7 ft after 2-1/2 Hours
ft after Hours

	CASING	SAMPLER	CORE BAR.
Type		S/S	
Size I.D	2-1/2"	1-3/8"	
Hammer Wt.	300	140	BIT
Hammer Fall	24"	30"	

SURFACE ELEV. 18.0'
DATE STARTED 1-3-75
DATE COMPL. 1-6-75
BORING FOREMAN J. TEXIERA
INSPECTOR C. DIAZ
SOILS ENGR. J. STANGENBERG

LOCATION OF BORING

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No	Pen	Rec
0	6	0' - 1'6	D	18	10	10		0'6	BLACKTOP	1	18	12
	7						MEDIUM DENSE		BROWN SAND, LITTLE GRAVEL TRACE OF CLAY & BRICK -FILL-			
	7											
	7											
	6							5'0				
	5	5' - 6'6	D	1	1	1	SOFT		DARK BROWN SILTY PEAT TRACE OF FINE GRAVEL	2	18	10
	2							8'0				
	2											
	3											
10	3											
	6	10' - 11'6	D	1	2	2	SOFT		GRAY CLAY, LITTLE PEAT	3	18	16
	7											
	7											
	8											
	6							15'0				
	19	15' - 16'6	D	2	2	3	SOFT		GRAY, SILTY CLAY LITTLE PEAT TRACE OF FINE GRAVEL	4	18	9
	13							18'0				
	16											
	29											
20	30											
	30	20' - 21'6	D	4	11	12	VERY STIFF		YELLOW CLAY TRACE OF FINE GRAVEL	5	18	18
	36											
	44											
	57											
	68							25'0				
		25' - 26'6	D	2	5	8	STIFF	26'6	YELLOW CLAY	6	18	16
30									BOTTOM OF BORING 26'6 - REQUIRED DEPTH -			
40												

GROUND SURFACE TO 25 FT., USED 2-1/2 "CASING: TYCON SAMPLED TO BOTTOM OF BORING

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler

Cohesionless Density		Cohesive Consistency		
0-10	Loose	0-4	Soft	30+ Hard
10-30	Med. Dense	4-8	M/Stiff	
30-50	Dense	8-15	Stiff	
50+	Very Dense	15-30	V-Stiff	

SUMMARY:
Earth Boring 26'6
Rock Coring
Samples 6

HOLE NO. HI-8

C. L. GUILD DRILLING & BORING CO., INC.

Avon, Mass.

SHEET 1 OF 1
DATE 14 JANUARY 75
HOLE NO HI-9
LINE & STA
OFFSET

TO C E MAGUIRE, INC.
ADDRESS WALTHAM, MASSACHUSETTS
PROJECT NAME SOUTH END URBAN RENEWAL
LOCATION BOSTON, MASSACHUSETTS
REPRESENT TO ABOVE-ATTN-MR. STANGENBERG
PROJ. NO. R-56
SAMPLES SENT TO ABOVE-ATTN-MR. STANGENBERG
OUR JOB NO. 53084

GROUND WATER OBSERVATIONS
at 8'6 ft after 2-1/2 Hours
at ____ ft after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type		S/S	
Size I.D	2-1/2"	1-3/8"	
Hammer Wt.	300	140	BIT
Hammer Fall	24"	30"	

SURFACE ELEV. 19.0'
DATE STARTED 1-3-75
DATE COMPL. 1-3-75
BORING FOREMAN J. TEXIERA
INSPECTOR C. DIAZ
SOILS ENGR. J. STANGENBERG

LOCATION OF BORING

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No	Pen	Rec
0	1	0' - 1'6	D	1	3	4	LOOSE			1	18	9
	1								BROWN, SANDY, LOAMY TOPSOIL			
	2											
	4											
	4							5'0				
	4	5' - 6'6	D	4	5	4	LOOSE		BROWN SAND, SOME GRAVEL SOME LOAM	2	18	8
	5											
	8								- FILL -			
	2							9'0				
10	2											
	4	10' - 11'6	D	1	2	2	SOFT		BROWN ORGANIC PEATY SILT	3	18	17
	4											
	4								TRACE OF FINE GRAVEL			
	5							15'0				
	9	15' - 16'6	D	2	2	2	SOFT			4	18	18
	8								BROWN FIBROUS PEAT			
	8											
	8							19'0				
20	14						MEDIUM					
	18	20' - 21'0	D	7	9		DENSE	21'0	SEE NOTE 1	5	12	8
	23	21' - 21'6	D	19			VERY			5A	6	4
	34						STIFF		YELLOW - GRAY CLAY			
	51											
	58							25'0	TRACE OF FIBERS			
		25' - 26'6	D	9	10	17	VERY STIFF	26'6	YELLOW CLAY WITH SILT LENSES TRACE OF FINE TO COARSE SAND	6	18	18
30									BOTTOM OF BORING 26'6 - REQUIRED DEPTH -			
									NOTE 1 - GRAY FINE TO MEDIUM SAND SOME SILT LITTLE FINE GRAVEL TRACE OF CLAY.			
40												

GROUND SURFACE TO 25 FT., USED 2-1/2 "CASING: TAKEN SAMPLED TO BOTTOM OF BORING

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 26'6
Rock Coring ____
Samples 6

HOLE NO. HI-9

C. L. GUILD DRILLING & BORING CO., INC.

Avon, Mass.

SHEET 1 OF 2
DATE 14 JANUARY 75
HOLE NO. HI-10
LINE & STA
OFFSET

TO C E MAGUIRE, INC. | ADDRESS WALTHAM, MASSACHUSETTS
PROJECT NAME SOUTH END URBAN RENEWAL | LOCATION BOSTON, MASSACHUSETTS
REP SENT TO ABOVE-ATTN-MR. STANGENBERG | PROJ. NO. R-56
SAMPLES SENT TO ABOVE-ATTN-MR. STANGENBERG | OUR JOB NO. 53084

GROUND WATER OBSERVATIONS
10'3 ft after 2-1/2 Hours
11' ft after 24 Hours
NO CASING

	CASING	SAMPLER	CORE BAR.
Type		S/S	
Size I.D	2-1/2"	1-3/8"	
Hammer Wt.	300	140	BIT
Hammer Fall	24"	30"	

SURFACE ELEV. 19.0'
DATE STARTED 12-31-74
DATE COMPL. 1-2-75
BORING FOREMAN J. TEXIERA
INSPECTOR C. DIAZ
SOILS ENGR. J. STANGENBERG

LOCATION OF BORING

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No	Pen	Rec
0	6							0'6	CONCRETE			
	5	0'6 - 2'	D	8	10	10	MEDIUM DENSE		BROWN SAND, SOME GRAVEL	1	18	5
	5								LITTLE SILT, TRACE OF BRICK			
	6											
	7											
	7	5' - 6'6	D	3	5	8	"		-FILL-	2	18	10
	3							7'0				
	3											
	4								BROWN FIBROUS PEAT			
10	3											
	3	10' - 11'6	D	2	2	3	SOFT		SOME FINE SAND	3	18	3
	3	11'6 - 13'	D	1	1	2				-	18	0
	6	13' - 14'6	D	6	6	11		14'0		4	18	10
	14						MEDIUM DENSE		GRAY FINE SAND			
	27											
	51								TRACE OF FIBERS			
	53											
	103							18'0				
	47											
20	51								YELLOW CLAY			
	54	20' - 21'6	D	8	9	12	VERY STIFF			5	18	8
	61								TRACE OF FINE GRAVEL			
	57											
	62								TRACE OF FINE SAND			
	58							25'0				
	54	25' - 26'6	D	2	3	6	STIFF			6	18	12
	25								YELLOW CLAY			
	22											
	19											
	20							30'0				
30	48	30' - 31'6	D	2	3	3	MEDIUM STIFF			7	18	16
	44											
	47											
	48								BLUE CLAY			
	49											
	46	35' - 36'6	D	1	4	4	"			8	18	16
	47											
	48											
	48											
40	49											

GROUND SURFACE TO 65 FT., USED 2-1/2 "CASING: THEN SAMPLED TO BOTTOM OF BORING

Sample Type
D: Dry C: Cored W: Washed
UP: Undisturbed Piston
TP: Test Pit A: Auger V: Vane Test
UT: Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 68'0
Rock Coring
Samples 15

HOLE NO. HI-10

C. L. GUILD DRILLING & BORING CO., INC.

Avon, Mass.

SHEET 2 OF 2
DATE
HOLE NO HI-10
LINE & STA
OFFSET

TO
PROJ. NAME
REPORT SENT TO
SAMPLES SENT TO
ADDRESS
LOCATION
PROJ. NO.
OUR JOB NO. 53084

GROUND WATER OBSERVATIONS

ft after Hours

ft after Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D			
Hammer Wt.			BIT
Hammer Fall			

SURFACE ELEV.
DATE STARTED
DATE COMPL.
BORING FOREMAN
INSPECTOR
SOILS ENGR.

LOCATION OF BORING

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No	Pen	Rec
40	68	40' - 41'6	D	3	3	3	MEDIUM			9	18	16
	57						STIFF					
	39											
	33											
	30											
	39	45' - 46'6	D	3	3	3	"			10	18	16
	40											
	38											
	39											
	30											
50	30	50' - 51'6	D	2	3	3	"			11	18	14
	39											
	44											
	45											
	43								BLUE CLAY			
	35	55' - 56'6	D	2	4	5	STIFF			12	18	16
	32											
	36											
	30											
	29											
60	52	60' - 61'6	D	1	4	4	MEDIUM			13	18	14
	53						STIFF					
	54											
	54											
	53											
		65' - 66'6	D	1	4	6	STIFF.			14	18	12
		66'6 - 68'	D	5	6	8	"	68'0		15	18	12
70									BOTTOM OF BORING			
									68'0			
									- REQUIRED DEPTH -			
80												

GROUND SURFACE TO FT., USED "CASING: THEN

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler

Cohesionless Density		Cohesive Consistency		
0-10	Loose	0-4	Soft	30 + Hard
10-30	Med. Dense	4-8	M/Stiff	
30-50	Dense	8-15	Stiff	
50+	Very Dense	15-30	V-Stiff	

SUMMARY:
Earth Boring
Rock Coring
Samples

HOLE NO. HI-10

C. L. GUILD DRILLING & BORING CO., INC.

Avon, Mass.

SHEET 1 OF 1
DATE 14 JANUARY 75
HOLE NO. HI-11
LINE & STA
OFFSET

TO C E MAGUIRE, INC. ADDRESS WALTHAM, MASSACHUSETTS
PROJECT NAME SOUTH END URBAN RENEWAL LOCATION BOSTON, MASSACHUSETTS
REPRESENT TO ABOVE-ATTN-MR. STANGENBERG PROJ. NO. R-56
SAMPLES SENT TO ABOVE-ATTN-MR. STANGENBERG OUR JOB NO. 53084

GROUND WATER OBSERVATIONS
at 10'1 ft after 2-1/2 Hours CASING AT 20'
at 11'6 ft after 24 Hours NO CASING

	CASING	SAMPLER	CORE BAR.
Type		S/S	
Size I D	2-1/2"	1-3/8"	
Hammer Wt.	300	140	BIT
Hammer Fall	24"	30"	

SURFACE ELEV. 18.5'
DATE STARTED 1-2-75
DATE COMPL. 1-2-75
BORING FOREMAN J. TEXIERA
INSPECTOR C. DIAZ
SOILS ENGR. J. STANGENBERG

LOCATION OF BORING

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No	Pen	Rec
0	1							0'6	CONCRETE			
	6	0'6 - 2'	D	3	4	6	LOOSE		BROWN SAND, SOME GRAVEL	1	18	10
	6								TRACE OF CLAY, TRACE OF BRICK			
	8											
	8											
	5	5' - 6'6	D	2	4	4	"		- FILL -	2	18	12
	5											
	5											
	6											
	6							10'0				
10	15	10' - 11'6	D	18	17	25	DENSE		BROWN FINE SAND, LITTLE CLAY	3	18	8
	30								TRACE COARSE GRAVEL & BOULDER			
	24								- POSSIBLE FILL -			
	26											
	30							15'0				
	23	15' - 16'6	D	15	15	16	HARD		GRAY CLAY & FINE SAND	4	18	14
	34											
	44											
	53											
	54							20'0				
20		20' - 21'6	D	3	5	10	STIFF	21'6	BLUE CLAY	5	18	16
									BOTTOM OF BORING			
									21'6			
									- REQUIRED DEPTH -			
30												
40												

GROUND SURFACE TO 20 FT., USED 2-1/2 "CASING: TAKEN SAMPLED TO BOTTOM OF BORING

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Triaxwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 21'6
Rock Coring
Samples 5

HOLE NO. HI-11

C. L. GUILD DRILLING & BORING CO., INC.

Avon, Mass.

SHEET 1 OF 2

DATE 14 JANUARY 75

HOLE NO. HI-12

LINE & STA

OFFSET

TO C E MAGUIRE, INC. | ADDRESS WALTHAM, MASSACHUSETTS

PROJECT NAME SOUTH END URBAN RENEWAL | LOCATION BOSTON, MASSACHUSETTS

REPORT SENT TO ABOVE-ATTN-MR. STANGENBERG | PROJ. NO. R-56

SAMPLES SENT TO ABOVE-ATTN-MR. STANGENBERG | OUR JOB NO. 53084

GROUND WATER OBSERVATIONS

7'3 ft after 48 Hours

ft after Hours

	CASING	SAMPLER	CORE BAR.
Type		S/S	
Size I D	2-1/2"	1-3/8"	
Hammer Wt.	300	140	BIT
Hammer Fall	24"	30"	

SURFACE ELEV. 18.5'

DATE STARTED 12-30-74

DATE COMPL. 12-31-74

BORING FOREMAN J. TEXIERA

INSPECTOR C. DIAZ

SOILS ENGR. J. STANGENBERG

LOCATION OF BORING

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No	Pen	Rec
0	6							0'6	BLACKTOP			
	5											
	4	2'6 - 4'	D	9	4	3	LOOSE		BROWN SAND, LITTLE GRAVEL	1	18	3
	3								TRACE OF CLAY			
	2											
	5	5' - 6'6	D	3	3	2	"		-FILL-	2	18	3
	10							7'0				
	38								FINE TO COARSE SAND SOME			
	40											
	68								FINE TO MEDIUM GRAVEL			
10	28	10' - 11'6	D	38	28	25	VERY DENSE		SOME CLAY	3	18	16
	30											
	30							13'2				
	33											
	34											
	16	15' - 16'6	D	9	8	9	VERY STIFF		YELLOW CLAY SOME FINE SAND	4	18	16
	17											
	23											
	36											
	39							20'0				
20	28	20' - 21'6	D	2	3	3	MEDIUM STIFF			5	18	16
	30											
	33											
	34								BLUE CLAY WITH FINE			
	37											
	19	25' - 26'6	D	2	2	3	"			6	18	14
	28								SAND LENSES			
	28											
	33											
	34											
30	28	30' - 31'6	D	3	3	3	"			7	18	14
	29							32'0				
	33											
	34											
	34											
	31	35' - 36'6	D	2	4	5	STIFF		BLUE CLAY	8	18	18
	34											
	38											
	41											
40	44											

GROUND SURFACE TO 75 FT., USED 2-1/2 "CASING: THEN SAMPLED TO BOTTOM OF BORING

Sample Type
D: Dry C: Cored W: Washed
UP: Undisturbed Piston
TP: Test Pit A: Auger V: Vane Test
UT: Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler

Cohesionless Density		Cohesive Consistency		
0-10	Loose	0-4	Soft	30+ Hard
10-30	Med. Dense	4-8	M/Stiff	
30-50	Dense	8-15	Stiff	
50+	Very Dense	15-30	V-Stiff	

SUMMARY:
Earth Boring 76'6
Rock Coring
Samples 16

HOLE NO. HI-12

C. L. GUILD DRILLING & BORING CO., INC.

Avon, Mass.

SHEET 2 OF 2

TO _____ ADDRESS _____

PROJECT NAME _____ LOCATION _____

REPORT SENT TO _____ PROJ. NO. _____

SAMPLES SENT TO _____ OUR JOB NO. 53084

DATE _____

HOLE NO. HI-12

LINE & STA _____

OFFSET _____

GROUND WATER OBSERVATIONS

at _____ ft after _____ Hours

at _____ ft after _____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D			
Hammer Wt.			BIT
Hammer Fall			

SURFACE ELEV. _____

DATE STARTED _____

DATE COMPL. _____

BORING FOREMAN _____

INSPECTOR _____

SOILS ENGR. _____

LOCATION OF BORING _____

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No	Pen	Rec
40	65	40' - 41'6	D	3	4	5	STIFF			9	18	18
	64											
	68											
	67											
	70											
	78	45' - 46'6	D	3	5	6	"			10	18	16
	71											
	73											
	76											
	78											
50	33	50' - 51'6	D	2	3	4	MEDIUM STIFF			11	18	15
	37											
	38											
	39											
	44											
	33	55' - 56'6	D	3	3	3	"			12	18	16
	38											
	39											
	32								BLUE CLAY			
	44											
60	39	60' - 61'6	D	3	3	4	"			13	18	16
	35											
	29											
	36											
	29											
	37	65' - 66'6	D	3	5	6	STIFF			14	18	15
	34											
	43											
	42											
	42											
70	38	70' - 71'6	D	2	4	6	STIFF			15	18	16
	51											
	53											
	41											
	44											
		75' - 76'6	D	3	4	5	"	76'6		16	18	14
									BOTTOM OF BORING 76'6			
80												

GROUND SURFACE TO _____ FT., USED _____ "CASING: THEN _____

Sample Type

D: Dry C: Cored W: Washed

UP: Undisturbed Piston

TP: Test Pit A: Auger V: Vane Test

UT: Undisturbed Thinwall

Proportions Used

trace	0 to 10%
little	10 to 20%
some	20 to 35%
and	35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler

Cohesionless Density		Cohesive Consistency		
0-10	Loose	0-4	Soft	30 + Hard
10-30	Med. Dense	4-8	M/Stiff	
30-50	Dense	8-15	Stiff	
50 +	Very Dense	15-30	V-Stiff	

SUMMARY:

Earth Boring _____

Rock Coring _____

Samples _____

HOLE NO. HI-12

C. L. GUILD DRILLING & BORING CO., INC.

Avon, Mass.

SHEET 1 OF 1
DATE 14 JANUARY 75
HOLE NO. HI-13
LINE & STA
OFFSET

TO C E MAGUIRE, INC. | ADDRESS WALTHAM, MASSACHUSETTS
PROJECT NAME SOUTH END URBAN RENEWAL | LOCATION BOSTON, MASSACHUSETTS
REPORT SENT TO ABOVE - ATTN - MR. STANGENBERG | PROJ. NO. R-56
SAMPLES SENT TO ABOVE - ATTN - MR. STANGENBERG | OUR JOB NO. 53084

GROUND WATER OBSERVATIONS
at 8'7 ft after 2-1/2 Hours
at ____ ft after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type		S/S	
Size I.D	2-1/2"	1-3/8"	
Hammer Wt.	300	140	BIT
Hammer Fall	24"	30"	

SURFACE ELEV. 17.5'
DATE STARTED 1-3-75
DATE COMPL. 1-3-75
BORING FOREMAN J. TEXIERA
INSPECTOR C. DIAZ
SOILS ENGR. J. STANGENBERG

LOCATION OF BORING

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No	Pen	Rec
0	3	0' - 1'6	D	68	18	9		0'6	BLACKTOP	1	18	9
	7						MEDIUM DENSE		BROWN SAND, SOME GRAVEL			
	8								TRACE OF CONCRETE			
	8								- FILL -			
	7							5'0				
	5	5' - 6'6	D	13	10	7	"		GRAY SAND, SOME CLAY	2	18	10
	12								LITTLE GRAVEL, TRACE CINDERS			
	7								- FILL -			
	13											
10	10							10'0				
	16	10' - 11'6	D	19	17	24	HARD		YELLOW - GRAY CLAY	3	18	11
	17											
	66								TRACE OF FINE GRAVEL			
	18											
	12						VERY STIFF					
		15' - 16'6	D	12	12	10		16'6		-	18	0
		16'6 - 18'	D	11	11	10	"	18'0	BLUE CLAY	4	18	16
20									BOTTOM OF BORING			
									18'0			
									- REQUIRED DEPTH -			
30												
40												

GROUND SURFACE TO 15 FT., USED 2-1/2 "CASING: THEN SAMPLED TO BOTTOM OF BORING

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler

Cohesionless Density		Cohesive Consistency		
0-10	Loose	0-4	Soft	30+ Hard
10-30	Med. Dense	4-8	M/Stiff	
30-50	Dense	8-15	Stiff	
50+	Very Dense	15-30	V-Stiff	

SUMMARY:
Earth Boring 18'0
Rock Coring
Samples 4

HOLE NO. HI-13

CARR-DEE TEST BORING AND CONSTRUCTION CORPORATION

37 LINCOLN STREET BEDFORD MASSACHUSETTS 02105 Telephone 272 4-30

To CHARLES A. MAGUIRE & ASSOCIATES, INC., BOSTON, MASS. Date JULY 18, 1969 Job No. 69104

Location SOUTH END BYPASS (URBAN RENEWAL PROJECT R-56), BOSTON, MASS. Scale 1" = 4 ft.

BORING B-3

GROUND SURFACE ELEV. 14.5

0'0"	FILL, FINE SAND, GRAV, CINDERS, FINE, DRY, BLACK	11 / 20
3'0"	FILL, SAND, GRAVEL, FIRM, DRY, YELLOW	16
5'6"	FILL, SAND, GRAVEL, FIRM, WET, YELLOW	11
7'6"	FILL, COARSE SAND & GRAVEL, FIRM, WET, YELLOW	9
13'0"	ORGANIC SILT, TRACE OF SHELLS SOFT, MOIST, DARK GRAY	3 / 3 / 3
25'6"	CLAY, MEDIUM, MOIST, BLUE	12
27'6"	CLAY, HARD, MOIST, YELLOW	31
30'0"		

WATER LEVEL 6'0" below ground surface

DATE STARTED 7-7-69
DATE COMPLETED 7-7-69

BORING B-3-A

GROUND SURFACE ELEV. 14.2

0'0"	FILL, SAND, CINDERS, TRACE OF GRAVEL, V. LOOSE, FINE,	2
2'6"	FILL, SAND, GRAVEL, LOOSE, DRY, BROWN	7
6'0"	FILL, SAND, GRAVEL, TRACE OF BRICK, LOOSE, WET, YELLOW	5
10'6"	FILL, COARSE SAND, GRAVEL, FIRM, WET, YELLOW	12
16'0"	FILL, COARSE SAND, GRAVEL, LOOSE, WET, YELLOWISH GRAY	6
18'6"	ORGANIC SILT, TRACE OF FIBERS, SOFT, MOIST, DARK GRAY	4
23'0"	ORGANIC SILT, TRACE OF SHELLS, SOFT, MOIST, DARK GRAY	5
25'0"	CLAY, MEDIUM, MOIST, BLUE	13
27'0"	CLAY, HARD, MOIST, YELLOW	32
31'6"	CLAY, VEINS OF FINE SAND, MEDIUM, MOIST, YELLOW	10
36'0"	CLAY, MEDIUM, MOIST, YELLOW	7
43'0"	CLAY, SOFT, MOIST, BLUE	5 / 5
53'6"	CLAY, MEDIUM, SOME FINE SAND & GRAVEL, HARD, MOIST, BLUE	23 / 84
70'0"		

BORING B-3-A (CONTINUED)

70'0"	CLAY, VEINS OF FINE SAND, SOFT, MOIST, BLUE	4 / 3 / 3 / 3 / 3 / 3
132'0"	FINE SAND & GRAVEL, STONES, VERY HARD, MOIST, GRAY	135
134'0"		

- REFUSAL -
(140 blows, no penetration)

WATER LEVEL 6'0" below ground surface

DATE STARTED 7-8-69
DATE COMPLETED 7-14-69

UNLESS OTHERWISE SPECIFIED, WATER LEVELS NOTED, WERE OBSERVED AT COMPLETION OF BORINGS, AND DO NOT NECESSARILY REPRESENT PERMANENT GROUND WATER LEVELS. FIGURES IN RIGHT HAND COLUMN INDICATE NUMBER OF BLOWS REQUIRED TO DRIVE 2" O.D. SPLIT TUBE SAMPLER 12 INCHES USING 140 LB. WEIGHT FALLING 30 INCHES.

Data Sheet - Site Preparation Contract "M-1" - Addendum No. 1

Contract Site Pavements and Pavement Bases

Owing to repeated resurfacing over the years, the bituminous pavements are of variable thickness, seldom less than 4 inches in depth, sometimes up to 8 or more inches.

Prior very limited excavations, made in the following streets, have indicated varying thicknesses of concrete and/or granite block roadway bases as outlined:

Massachusetts Avenue

Washington Street to Shawmut Avenue - Usually 6" but up to 9"

Shawmut Avenue to Tremont Street - 6", usually thicker, up to 9"

Columbus Avenue to railroad - 6" to 15", generally at the greater thickness

Columbus Avenue

Northwesterly South End Project Limit to Davenport Street - Usually 6", sometimes thicker, up to 9"

Davenport Street to Massachusetts Avenue - 6" to 12", generally at the greater thicknesses

Massachusetts Avenue to West Rutland Square - 6" to 14", generally at near 9"

West Rutland Square to Clarendon Street - 6" to 14", generally at the greater thicknesses

Tremont Street

Northwesterly South End Project Limit to W. Springfield Street - 6" to 19", generally in the middle thicknesses

W. Springfield Street to Rutland Square - generally 6", sometimes thicker

Rutland Square to Dartmouth Street - Some less than 6", usually 6" to 12"

Tremont Street (Continued)

Dartmouth Street to Hanson Street - 6" to 10", generally 6"

Braddock Park and Wellington Street - Records indicate macadam roadway bases.

Report Binder

Stock No./Color

80571	Black
80572	Lt. Blue
80573	Dk. Blue
80578	Rust
80579	Exec. Red

MADE IN THE USA